AN EXAMINATION OF STUDY HABITS AND ATTITUDES OF UNDERGRADUATE AGRICULTURAL EDUCATION MAJORS

by

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CHAPTER I

INTRODUCTION

Secondary teaching in agriculture is based to a great extent on problems that are meaningful and related to occupational experiences of the student. As such, an essential element of effective instruction in Vocational Agriculture in the public schools has been the development of problem-solving skills. Students in Vocational Agriculture must be able to evaluate, draw inferences, think clearly, and make decisions when problem solving.

Problem solving requires a number of skills, including study skills (Phipps, 1980). Study skills have been defined as academic skills needed for success in coursework. (Karasiewicz, 1981.) However, in Vocational Agriculture, study skills can also be applied to non-academic experiences. Modern agricultural workers are faced with a world of changing information. These workers should be able to work with information in order to evaluate alternatives and make decisions. Thus, study skills could contribute to success in agricultural work. This need for study skills is recognized in Agricultural Education, as

noted by Phipps in his Handbook on Agricultural Education in the Public Schools. Phipps notes that many students who enter high school have very little idea of how to study effectively. This point illustrates the need for the secondary teacher to provide considerable direction to students in developing study skills. Phipps maintained that:

> During the first few days of a course, the teacher should spend considerable time in giving the students suggestions on how to study; the habits formed during this early period will probably continue throughout the course. Students must be trained to solve problems because many of the jobs in agriculture are of a problem solving nature. Students must train themselves to concentrate, to study systematically, to evaluate information, to make inferences, and to draw conclusions. (p.95)

More recently, Newcomb, McCracken and Warmbrod (1986) have also recognized the value of study skills in Vocational Agriculture. The authors point out that teachers must recognize the deficiencies in study skills that students might have. According to the authors:

> ...students as well as teachers need to be adept

> in the teaching strategies and techniques used. Successful teachers make sure that learners are active participants in the learning process. Students, to be active learners, must have both the desire and the requisite study skills for active participation in the various techniques and activities employed by the teacher. (p. 20)

Thus, acheivement motivated students who use effective study skills should be actively involved in the learning process and be able to learn on their own. However, Newcomb, McCracken and Warmbrod (1986) indicate that independent study results in frustration unless students have been taught the skills necessary for independent study.

The true value of study skills in Vocational Agriculture lies in the transference of these skills to post-educational experiences and the application of skills to problem-solving in a chosen occupation after graduation from high school. Students in Vocational Agriculture who are employed after high school should be able to utilize such skills in order to make decisions while on the job or evaluate alternatives in reaching conclusions. Students who attend postsecondary schools after high school should

utilize study skills to maintain high levels of academic acheivement and promote academic success.

Statement of the Problem:

In secondary schools, many hours are spent teaching students mathematics, science, and language arts; however, little emphasis is focused on instruction towards becoming a better learner. Parish and Kiewra (1984) state that:

> Most school curriculums fail to teach students about their cognitive equipment; how to process information; or about practical skills such as notetaking and review...."learning to learn" should be a subject area for all students-while at the very least, prospective teachers must first become effective learners if they are to become good teachers. (p. 39)

The importance of study skills in high school is illustrated in a study which identified "survival skills" needed for success in high school. Students classified as "successful" and "unsuccessful" were asked to name skills and behaviors that contributed to success in high school. Of the five items which received the highest percent of "very important" ratings, one (exhibits interest in improving academic performance) was related to effective study habits.

Of the five items which received the highest percent of "serious problems" ratings, two (cannot follow written directions and makes poor grades) were related to study habits (Brown, Kerr, Zigmond, and Harris, 1984).

In order to teach study skills to secondary school students, undergraduate education majors and inservice teachers should possess and utilize effective study skills and habits. Teachers and future teachers must also feel competent in teaching study skills in their content areas. However, according to Paolino (cited in Stoodt and Balbo, 1979), even though teachers recognize deficiencies of students and the importance of study skills , they often feel inadequately prepared to teach study skills. Stoodt and Balbo also state that secondary teachers have not had opportunities to acquire knowledge regarding study skills instruction in their area of specialization.

Inadequate preparation to teach study skills indicates a need in teacher education for: 1) recognition of the importance of study skills and 2) identification and instruction regarding study skills.

It would be beneficial to assess how undergraduate education majors (who form the pool of future teachers) perceive the importance of study skills. An examination of

education majors' own study habits and attitudes would also be helpful in determining how qualified education majors feel they are to teach study skills in secondary classrooms.

Purpose of the Study

The purpose of the study is to answer the following questions:

1. Are demographic characteristics of undergraduate students in Agricultural Education related to study habits and attitudes, perceived importance of study skills instruction, and perceived qualification to teach study skills?

2. Do undergraduate students in Agricultural Education feel study skills instruction is important in teaching secondary Vocational Agriculture students?

3. Do undergraduate students in Agricultural Education feel qualified to teach study skills in Vocational Agriculture?

4. How do the study habits and study attitudes of undergraduate students in Agricultural Education affect their perceptions of the importance of study

skills and their perceived qualification to teach study skills?

Determining the perceived importance of study skills instruction in Vocational Agriculture and perceived qualification to teach study skills may indicate a need for curriculum revision in Agricultural Education at Kansas State University to include a course or unit on teaching study skills in secondary Vocational Agriculture. Such revision could provide information about study skills instruction to Agricultural Education majors. An examination of actual study habits and attitudes may also provide information on how to assist undergraduate Agricultural Education majors in becoming better learners. By better preparing future educators to teach study skills in their classes, high school Vocational Agriculture students could benefit by becoming better learners.

Significance of the Study:

The lack of research concerning study skills instruction in Vocational Agriculture should be addressed. The importance of study skills being taught in Vocational Agriculture is increasing. This is evidenced by a study in which 45.4 percent of Vocational Agriculture students

participating in the study indicated plans to continue education after high school, either in a postsecondary vocational school or in college (Arrington, 1985).

The importance of study skills is also supported by evidence from a study done with freshman who received less than a "C" average during their first semester at college. When asked to identify reasons for poor academic performance, a majority of students indicated their failure to develop adequate study habits and to learn to study well were major or moderate reasons for their lack of academic accomplishment (Hart and Keller, 1979). In discussing instructor expectations for high school students who enroll in postsecondary agricultural programs, Gee (1982) noted that student should be able to read and comprehend what they read, write and communicate effectively, and take notes that can be used in classes. Smith, Shores, and Brittain (1963) state that the chief reasons for inefficiency in learning are carelessness and ineffective habits of study. Elliot (1966) notes that "seventy-five percent of academic failure is due to poor study and examination techniques" (p. 195). In a study which addressed the perceived orientation needs of new students entering the university, Kramer and Washburn (1983) noted that students consistently ranked and perceived

academic needs (e.g., "need to know how to get good grades") as important both before and after orientation. Kramer and Washburn suggested that improving or increasing academic knowledge, skills, and competencies required for a career is of more lasting consequence that knowing about other requirements.

Finally, in a report on research concerning study skills, Armbruster and Anderson (1981), suggested that teachers:

> ...have a responsibility to teach study skills, rather than erroneously assuming that students already know how to study. Teachers need not sacrifice content matter, in fact, teaching students to study will facilitate teaching the content.
>
> (p.155-156)

In view of the foregoing statement, the lack of research concerning the study skills and qualification to teach study skills in undergraduate education majors is of concern to all fields of study, not just Vocational Agriculture. This study will assess the perceptions undergraduate Agricultural Education students have of the importance of study skills in teaching secondary Vocational Agriculture and how qualified undergraduates in Agricultural

Education feel they are to teach such skills. This study will also examine study habits and attitudes of undergraduates in Agricultural Education.

Statement of Hypotheses:

The following hypotheses will be examined:

1. Perceived importance of study skills instruction in secondary Vocational Agriculture will be related to:

- Delay Avoidance
- Work Methods
- Teacher Approval
- Educational Acceptance
- Study Habits
- Study Attitudes
- Study Orientation
- instruction in study skills

2. Perceived qualification to teach study skills will be related to:

- Delay Avoidance
- Work Methods
- Teacher Approval

- Educational Acceptance
- Study Habits
- Study Attitudes
- Study Orientation
- instruction in study skills

3. Instruction in study skills will be related to perceived importance of study skills instruction in secondary Vocational Agriculture classes.

4. Perceived importance of study skills will be related to demographic characteristics of undergraduates in Agricultural Education.

5. Perceived qualification to teach study skills will be related to demographic characteristics of undergraduates in Agricultural Education.

6. Instruction in study skills will be related to demographic characteristics of undergraduates in Agricultural Education.

7. Scores on the Survey of Study Habits and Attitudes will be related to demographic characteristics of undergraduates in Agricultural Education.

8. Significant differences will be found among grade levels (e.g., freshman, sophomore, junior, senior) on:

- mean scores of the Survey of Study Habits and Attitudes
- perceived qualification to teach study skills
- Study Attitudes
- Study Orientation
- perceived importance of study skills

9. Significant differences will be found between subjects who have taken a class in study skills and those who have not on a measure of:

- perceived qualification to teach study skills
- perceived importance of study skills instruction in secondary Vocational Agriculture

10. Significant differences will be found between occupational groups (desire to teach, not to teach), on:

- perceived importance of study skills instruction in secondary Vocational Agriculture
- perceived qualification to teach study skills

Definition of Terms

Grade level: current academic classification of the subject (e.g., freshman, sophomore, junior, or senior)

Hometown: population of town where the subject was reared

Occupational goal: type of employment the subject desires after graduation from college

Perception of importance of study skills instruction: perception of how important study skills are for academic success in high school, secondary Vocational Agriculture, and postsecondary school

Problem-solving: a process of finding solutions to life situations which create difficulty, suspense, confusion, or doubt

Socioeconomic status: position occupied in the status structure of the community using Hollingshead's Two Factor Index of Social Position

Study skills: academic skills (including time management, reading skills, notetaking, text study methods, exam

preparation, and memory improvement) needed for success in coursework

Study Attitudes: the combination of the subscales Teacher Approval (TA), and Educational Acceptance (EA) on the Survey of Study Habits and Attitudes (SSHA); opinions and beliefs regarding academics and teachers

Study Habits: the combination of the subscales Delay Avoidance (DA), and Work Methods (WM) on the SSHA; behavior associated with academic work and use of study techniques

Study Orientation: the overall combination of the scores for Study Attitudes and Study Habits from the SSHA

Perceived qualification to teach study skills: perception of how qualified subjects feel they would be to teach study skills in secondary classes and how well the KSU Agricultural Education curriculum prepares graduates to teach study skills in secondary Vocational Agriculture

Limitations:

The study is limited in that it will be conducted solely at one university in the midwestern United States, with a small sample size. It is further limited in that it

makes use of an intact group in only one field of education, which could limit the generalizability of the results. The collection of data in only one setting is also a limitation. The use of a non-standardized instrument may be a weakness of this study.

CHAPTER II

REVIEW OF RESEARCH AND RELATED LITERATURE

This chapter presents a review of research and related literature concerning study skills and study skills instruction involving undergraduate education majors and inservice teachers. The following divisions are outlined in presenting the review of research and the literature:

1. The need for and importance of study skills instruction.
2. Effectiveness of study skills instruction.
3. Study skills orientation in undergraduate education majors and inservice teachers.

The development of study skills in college undergraduates has prompted an abundant amount of research. Research included in this study covers a period of three decades. A variety of topics and themes have been addressed ranging from surveys of unviversities offering courses in study skills to the

construction and validation of study skills assessment techniques and devices.

The Need for and Importance of Study Skills Instruction

Few educators, parents, or school administrators would deny the importance of students acquiring effective study skills and habits to improve learning and academic performance. In fact, Devine (1981) states that teaching study skills to students may be the single most valuable contribution of teachers and schools (p. 3). Stoodt and Balbo (1979), after completing research on the integration of study skills instruction in secondary classrooms, concluded that combining study skills instruction with content lead to greater mastery of both study skills and content. Stoodt and Balbo also suggested that students who were not taught study skills apparently did not identify and learn such skills independently. Dulin (1971) reveals that training in the psychology of study is important to effective teaching in any secondary level subject matter course. Dulin suggests that:

> ...every teacher is duty-bound to be able to respond clearly and directly to the common question of "Just how should I study for your

> course?" This means that the teacher should be aware of what research tell us about how to organize materials for good retention, how to take tests, how to order one's time, and how to review; in general terms, then, how to study.
>
> (pg. 112-113)

Tonjes and Zintz (1981) indicate that a major goal of teaching is that students become independent learners who are able to apply knowledge across many situations. Pauk (1984) also states that the goal of effective study habits is independent learning; the internalization of learning. According to Pauk, a student who has mastered study skills is less dependent on others for learning.

Admission of the need for study skills has come from many diverse sources. As early as 1937, the importance of study skills was recognized. According to Brink (1937), a critical appraisal of education in the 1930's resulted in a growing realization of the significance of study in learning. Brink also noted that for students:

> Of utmost importance is it, particularly on the secondary school level, that they develop independent habits and abilities to study, to

> the end that they become self-directing individuals. (p. 5)

Askov and Kamm (1982) indicate that due to computerized information systems, the amount of information which is easily accessible and the speed of information retrieval in recent years have increased the need for students to learn and master certain study skills related to analyzing and manipulating information. Students who do not acquire basic skills that allow them to keep pace with increased demands for the analysis of information may be overwhelmed by the sheer amount of information and sophisticated information technology.

The National Commission on Excellence in Education (1983), in their report, A Nation at Risk: The Imperative for Educational Reform, noted that in many schools, the teaching of study skills is "haphazard and unplanned" and that many students complete high school without disciplined and systematic study habits. (p. 22) The Commission also recommended that:

> Instruction in effective study and work skills, which are essential if school and independent time is to be used efficiently, should be introduced in the early grades and continued

throughout the student's schooling. (p. 29)

This recommendation implies that teachers at all levels should include study skills instruction in their classes.

Educators have also recognized the need for study skills instruction. According to Devine (1981), teachers can, in the classroom, teach study skills in an organized way and give students practice in using study skills. Devine points out that aside from intelligence and environment, motivation, and self-esteem, the student's ability to manage certain key competencies necessary for school learning also influences school acheivement.

Secondary teachers may erroneously assume that students have already mastered certain study skills in elementary grades. Several researchers have indicated that such assumptions may be wrong. Herber (1965) suggested that teachers cannot assume that students are competent in applying study skills to analysis and problem-solving. According to Herber, students need guidance in the development of competence in study skills; he indicates that teachers have the responsibility to develop this competency. Armbruster

and Anderson (1981) also cautioned teachers not to assume that students already know how to study.

Although teachers may recognize study skill deficiencies in their students and attempt to alleviate deficiencies, study skills may be taught apart from content. If study skills are taught in isolation, instruction may not be meaningful and skills mastery is difficult (Askov and Kamm, 1982). Maxwell (1979) states that instruction in study skills should be tied to students' regular courses. Maxwell also indicated that study skill courses taught as formal subjects might waste students' time if students are already familiar with certain skills. Students may then disregard or ignore study skills instruction and resort to more familiar methods of study such as memorization. Henderson (1985) indicates that if students do not go beyond low levels of learning (e.g., memorization of facts and lists), they may develop a passive approach to learning and depend on teachers to provide both information and direction. Henderson concludes that:

> ...students do not see themselves as actively involved in the learning process; they wait for the teacher to instruct them. Students are not developing the ability to organize and use

knowledge... (p. 72)

Tonjes and Zintz (1981) also suggest that the processes for obtaining, integrating, and reviewing information are much more important than mere memorization of specific data.

Study skill instruction should not only include skill mastery and application, but also independence in using skills and a positive attitude toward using study skills. The task of the teacher is not only to make study skills instruction interesting, but also to demonstrate skill relevancy in content study and everyday life. Armbruster and Anderson (1981) report that students who receive study skills instruction should not only know why, when, and how to use particular study strategies, but they should also monitor their progress to ensure that study strategies promote desired results.

The literature reveals that many educators do recognize the need for study skills instruction. Kuethe (cited in Devine, 1981) discusses this need by implying that:

> A student who develops efficient study methods has in a true sense learned how to learn. He has not changed his innate capacity for learning

> but rather discovered how to get the maximum mileage out of what ability he has. The student becomes more efficient at mastering the academic content because he has learned to concentrate, to organize the material he has learned, to employ mnemonic aids, and to follow study with review and self-testing. Such a student has learned to learn in an effective manner that which he intends to learn. (p. 10)

Thus, students who acquire and utilize study skills can become self-directed, independent learners who are able to use information and know how to learn efficiently.

Effectiveness of Study Skills Instruction

The evaluation of study skills instruction has been an ongoing process. As early as 1953, study skills programs at several universities were being surveyed and evaluated for their effectiveness (Blake, 1955).

A review of the literature reveals that a number of studies have focused on evaluating the value and effectiveness of study skills and study skills instruction. Usually, the effectiveness is measured by

measuring gains in academic acheivement (e.g., grade point average) and changes in perceptions and attitudes involving study skills. Entwisle (1960), in reviewing 22 study skills courses, noted that improvement in grade point average (and reading scores) varied greatly, although favorable results were associated in each case. Entwisle also found a large amount of divergence among the courses, with courses lasting between 7 hours and several semsters, and instructional efforts focused on different areas of study. Despite these differences, Entwisle concluded that:

> ...(that) improvement follows such diverse courses leads to the conlusion that improvement is likely following many kinds of study-skills courses. ...All the voluntary college-level courses report gains that are rather impressive, and in every case, where the follow-up results are available, the gains persist. (p.250)

More recently, Whitehill (1972) reported that better study skills allowed students to process information more effectively, thus improving students' grade point averages. Robyak and Downey (1978), investigating the effectiveness of a study skills course for students with differing acheivement levels

and personality types, suggest that students generally appeared to increase their knowledge of study skills, use of study habits, and grade point averages. In evaluating study skills instruction in a fifteen week course, Dansereau (1979) found that students in an experimental group showed greater pre-course/post-course changes in comprehension, retention, and self-report measures than students in the control group.

Although the evaluation of the effectiveness of study skills instruction is based primarily on courses taught as though they were formal subjects, some literature reports the effectiveness of using other strategies for study skills instruction.

Haslam and Brown (1968), using the Brown-Holtzman Effective Study Course, found that high school sophomores who were given study skills instruction had significantly higher grade point averages and more knowledge of efficient study techniques then their peers in a control group. In investigating the ingredients of successful treatment programs for underacheivers, Bednar and Weinberg (1970) reported that the most important variables related to improved academic performance were the degree of structure and

the duration of the program. Some form of counseling, whether individual or group, also appeared to improve the effectiveness of the program. In the same study, Bednar and Weinberg suggested that study skills courses accompanied by some form of counseling were more often associated with improved academic acheivement. Gagne (1967) also states that group discussions are ideal for guiding student thinking along certain lines and stimulating the evaluation and dissemination of new ideas. Bednar and Weinberg also reported that of 19 studies concerning study skills programs, 83 percent were successful, or found trends toward effectiveness in improving academic performance. Stoodt and Balbo (1979), integrating study skills and content information into a twelfth grade economics course, utilized five skills areas of outlining, locating information, vocabulary in context, chart interpretation, and study reading. The authors found that students in the experimental group scored significantly higher on a posttest than on a pretest and scored significantly higher on the posttest than did students in a control group. Karasiewicz (1981) compared a control group that received course content review assistance with an experimental group that

received both course content review and study skills emphasis. The author noted that students in the experimental group scored significantly higher on the Survey of Study Habits and Attitudes (SSHA), though they did not receive significantly higher final course grades.

Weltner (1977), in developing supplemental study guides designed to teach both content and study skills in mathematics, concluded that the guides were more effective in promoting student acheivement than a lecture course with no study guides. Gadzella, Goldston, and Zimmerman (1977) matched two groups of 80 students on sex, college status, race, mental ability and reading test scores. Students in an experimental group who were given study technique guides, participated in class discussions, and took quizzes over class material scored progressively higher on five subscales of the Survey of Study Habits and Attitudes. The authors believe this indicated the students gained more confidence in study techniques which they already employed. However, the experimental group did not have a significantly higher grade point average than the control group.

Gadzella (1979) also compared study skills instruction on a one-to-one basis versus on a class basis. In comparing scores on the Survey of Study Habits and Attitudes, the author reported that students who were taught study skills on a one-to-one basis acheieved higher scores by the semester's end.

The effect of study skills instruction also seems to influence long-term academic acheivement. Bednar and Weinberg (1970) indicated that treatment programs for underacheivers which were intensive and included directive, academic remediation in combination with individual or group counseling were probably most effective in producing long-term results. In a study which followed students who had participated in a study skills course, Robyak and Downey (1979) reported that the best predictors of extended academic performance were past academic performance and the change in study habits made during the study skills course.

Research has also been directed toward investigating the contribution of study skills to academic success. In his book, How to Study in College, Pauk (1984) states that one of the distinguishing characteristics of the successful student is that they have good study skills.

McCausland and Stewart (1974), examining some of the factors which contribute to success in college, suggest that aptitude, study skills, and attitudes are all important components of success in coursework.

These research findings clearly show that study skills instruction is effective and results in improved academic performance, both immediately following the instruction, and for extended periods of time. However, the lack of literature and research concerning secondary school students indicates that more research in the area of effectiveness of study skills instruction is needed.

Study Skills Orientation in Undergraduate Education Majors and Inservice Teachers

Numerous educators and researchers have suggested that content-area teachers should incorporate study skills instruction with content area instruction (Askov and Kamm, 1982; Brink, 1937; Devine, 1981; Henderson, 1985; Herber, 1965; Tonjes and Zintz, 1981). Thus, undergraduate education majors should be expected to possess and utilize effective study skills, as they represent future content-area teachers.

A review of the literature discloses a lack of research concerning the study skills of inservice teachers and undergraduate education majors. The majority of research has addressed reading competency in inservice teachers.

In relating reading to study skills, Askov and Kamm (1982) noted that study skills should be considered an aspect of reading. The authors point out that as one moves from learning to read to reading to learn, skills such as locating information and interpreting information become more important. Askov and Kamm contend that since most content area teachers use textbooks to convey information, teachers must teach study skills needed to learn from texts.

Standardized tests have often been used to measure reading competency in teachers. Cline (1967), using the Nelson-Denny Reading Test, reported that of 57 elementary education majors, 52 % were found to be functionally illiterate in reading teacher manuals accompanying basal texts. Hodges (1982), in replicating Cline's study over three years, found that percentile ranks declined from 43 % to 35 % in vocabulary, from 52 % to 47 % in comprehension, and from 48 % to 42 % in total score. Geeslin and York

(1971), also using the Nelson-Denny Reading Test, reported that the mean score of comprehension for one group of teachers in an inservice training program was at the 9.6 grade level. Another group of teachers' mean comprehension scores were at the 8.8 grade level.

Gentle and McMillian (1977), who investigated nearly 350 teachers who had attended classes or received degrees at 62 universities or colleges across the United States, reported that many of the teachers demonstrated a wide range of deficiencies or discrepencies in their reading abilities. Zais (1978) measured the reading skills of 387 Kent State University seniors in secondary education (using the Diagnostic Reading Tests, Survey Section: Upper Level) and indicated that the mean reading performance score attained by the prospective teachers was 14 percentile ranks above the mean of college freshmen. Zais also found that the mean score of 15 % of the prospective teachers was 37 percentile ranks below the level of college freshmen. Hodges (cited in Hodges and Nash, (1983), reported that of 117 students seeking admission to teacher education programs at Colorado State University 83 wrote an essay at the ninth grade level or below on the Fry Readability Test. Twenty-seven

students indicated serious spelling deficiencies. In accordance with these findings, Hodges and Nash (1983) suggest that:

> A review of recent investigative studies indicates that many students leaving our classrooms do not write in colleges and universities and that they proceed to go out and teach public school students. Studies of education majors and practicing teachers in the area of reading skills have shown, for the most part, mediocre to poor results. (p. 71)

Several studies have also investigated reading habits of preservice and inservice teachers. Teachers who were competent readers tended to report that they read a great deal (Mikulecky and Ribovich, 1977). Hawkins (1967) found a wide range in amount of leisure reading among elementary school teachers. Odland and Ilstrup (1963) reported that 30 % of preservice teachers read five or more books in a half-year period and that ten percent read no books in a half-year period. Duffy (1973) indicated the mean number of books read by elementary teachers per year was 3.17 in 1966 and 3.2 in 1972.

Little research has specifically addressed the study skills and habits of inservice teachers or education majors. Askov, Kamm, and Klumb (1977) investigated elementary teachers' mastery of study skills using parts of the Wisconsin Design for Reading Skill Development which yielded information about attainment of specific skills. The authors found that the median percent of skills mastered at Level G of the test (which would correspond to the end of elementary or junior high school) were at the 51-60 percent range. The authors suggested that the low scores indicated the need for increased effort in the area of study skills in teacher education. Askov, Kamm, Klumb, and Barnette (1980) compared the mastery of selected study skills among teachers, children, and graduate education students (most of whom were teachers or former teachers) using the Wisconsin Design for Reading Skill Improvement. The authors reported that when mean scores were considered in relation to mastery level required for each skills test, undergraduate students acheived a mean score above mastery (80 % correct) on only one skill out of ten. Graduate students acheived a mean score above mastery on three of ten skills, and elementary teachers were consistently below mastery

level. Askov, Kamm, Klumb, and Barnette concluded that:

> Extra efforts in teaching basic skills, in addition to methodology for teaching them, are called for since functioning levels appear to be so low. Inservice teacher education efforts also need to be directed to teacher's acquisition of study skills. One can no longer assume that teachers possess the study skills but do not know how to incorporate skill instruction into content studies. Indeed, how can teachers teach those skills they have not mastered themselves? The answer is unfortunately apparent-they don't.
>
> (p. 211-212)

Although there are few studies addressing the study skills of undergraduate education majors or inservice teacher, those studies which have been done reveal a need for examining current efforts to provide study skills instruction in educational curriculums.

Summary

This chapter has presented a review of research and writings which are related to this study. These findings have revealed several important points:

1. Many diverse groups (including educators, researchers and governmental commissions) have recognized the importance of study skills and study habits in fostering academic success. They have advocated the inclusion of structured study skills instruction in all levels of education.

2. Teachers cannot assume that students are competent in the application of study skills to the classroom.

3. Teachers have the responsibility to direct and guide students in the development and utilization of effective study skills and study habits.

4. Study skills instruction generally results in improved academic performance and increased confidence in academic ability.

5. Study skills instruction influences long-term academic acheivement.

6. Preservice and inservice teachers often have low reading ability and poor reading habits.

7. Preservice and inservice teachers often have not

mastered study skills. Teachers who do not master certain study skills do not include such study skills instruction in their classrooms.

These points taken from the review of literature would seem to further substantiate the need for identification and analysis of the study habits and attitudes of undergraduate education majors.

CHAPTER III

METHODS

Introduction

In explaining the methods used in this study, this chapter will sequentially present the following topics: population, procedure, instrumentation, and analysis of data.

Population

All undergraduate Agricultural Education majors at Kansas State University were selected as research subjects for the study. In selecting this population several criteria were taken into consideration: 1) none of the subjects had any experience teaching Vocational Agriculture in secondary schools (except student teachers from the fall term of 1985), 2) all subjects were or would be following a similar professional education curriculum while they attended college, regardless of postgraduation plans, and 3) using this

population allowed generalization to other similar populations across the United States.

Procedure

Student records from the Colleges of Agriculture and Education at Kansas State University were used to identify the subjects employed in the study. Letters were sent to all undergraduate Agricultural Education students (N = 73) at Kansas State University asking for their participation in the study (Appendix A). Subjects were informed that their participation was voluntary and that they could withdraw from the study at any time (in compliance with Kansas State University guidelines for research involving human subjects - Appendix B). Two one-hour time periods were set up for data collection. Subjects were asked to indicate which of the times that they would be able to attend. Before completing any of the instruments, all subjects were asked to sign forms (Appendix B) indicating their consent to participate. After two weeks, follow-up letters were sent to subjects who had not responded (Appendix C). Due to a low response rate from the first follow-up letter, a second follow-up letter was sent to non-respondents (Appendix D), and two more

one-hour time periods were set up for data collection. Subjects who were unable to attend any of the one-hour periods were asked to make individual appointments to complete the instruments. Table 1 reports the number of subjects who participated at what point in the data collection process. At the time in which data were

Table 1

Data Collection

Date	Number of Ss	Percent
February 17, 1986	19	35.85
February 19, 1986	12	22.60
March 5th, 1986	3	5.70
March 6th, 1986	0	0.00
By appointment	19	35.85
Total	53	100.00

Note. N = 53

collected, subjects completed a standardized test and a questionnaire which together required approximately 45 minutes to finish. The researcher and another graduate student supervised the data collection periods. The researcher supervised all subjects who were unable to attend the one-hour periods. Table 2 reports the number of subjects who participated in the study. The number of respondents represents a 72.60 percent response from the population.

Instrumentation

In developing the study, one non-standardized survey instrument (Appendix E) was developed and one standardized instrument was used. The non-standardized survey was developed following the identification of variables to be used in the study. Information collected included: demographic data (e.g., size of hometown, socioeconomic status, high school enrollment, enrollment in Vocational Agriculture program, transfer status in postsecondary education), evidence of instruction in study skills, occupational goals, perception of the importance of study skills instruction in teaching secondary Vocational

Table 2

Number of Agricultural Education Students Participating in Study By Grade Level

Grade level	Number of students	Percent of N
Freshman	5	9.44
Sophomore	5	9.44
Junior	11	20.75
Senior	32	60.37

Note. N = 53

Agriculture, and perception of qualification to teach study skills. Demographic data were collected using checklists. Five point Likert-type scales consisting of two separate sets of descriptors (1 = Strongly Disagree, 5 = Strongly Agree; 1 = Rarely, 5 = Almost Always), were used to measure perceived importance of study skills instruction, qualification to teach study skills, and instruction in study skills. After initial

construction of the survey instrument, several professional staff and a colleague (Appendix F) were asked to assist in refining items.

Subjects' socioeconomic background was quantified using the Hollingshead Two Factor Index of Social Position (1957). This scale is premised upon the assumption that different occupations are valued differently by members of society, and that men and woman who possess similar education tend to have similar tastes and exhibit similar behavior patterns. Subjects were asked to indicate the occupation and years of schooling of both parents. These factors were weighted and combined to yield an Index of Social Position. The scale used in rating occupations ranks professions into seven positions: 1) executives and proprietors of large concerns and major professionals, 2) managers and proprietors of medium concerns and minor professionals, 3) administrative personnel of large concern, owners of small independent businesses, and semiprofessionals, 4) owners of little businesses, clerical and sales workers, and technicians, 5)skilled workers, 6) semiskilled workers, and 7) unskilled workers. The educational scale is divided into seven postiions: 1) graduate professional training (persons

who completed a recognized course which led to the receipt of a graduate degree), 2) standard college or university graduates (individuals who had completed at least a four-year college or university course leading to a recognized college degree), 3) partial college training (individuals who had completed at least one year but not a full college course), 4) high school graduation (all secondary school graduates, whether from a private preparatory school, public high school, or parochial high school), 5) partial high school (individuals who had completed the tenth or eleventh grades but not the high school course), 6) junior high school (individuals who had completed the seventh, eighth, or ninth grades), and 7) less than seven years of school (individuals who had completed less than seven years irrespective of the amount of education received). The researcher and another graduate student calculated each individual's social position. The interrater reliability was .93. An example of the equation which was used to calculate social position is presented in Figure 1. The scores were then categorized into a Social Class using the scale constructed by Hollingshead.

The other instrument used in the study was the Survey of Study Habits and Attitudes

Figure 1. The Two Factor Index of Social Position.

Factor	Scale score	Factor weight	Score x weight
Occupation	3	7	21
Education	3	4	12
Index of Social Position Score			33

(Appendix G) developed by Brown and Holtzman (1967). The instrument is a 100 item questionnaire designed to measure a student's study methods, motivation, and attitudes towards academic activities. Students respond to each question using a five point scale (1 = Rarely, 5 = Almost Always) which indicates agreement with an item or percentage of time spent in an activity. Summation of the responses allows the user to obtain four primary scales. According to Gadzella (1979) these are:

a) Delay Avoidance (DA), which indicates the extent to which a student avoids delay and

> distraction; b) Work Methods (WM), which indicates how effectively the student organizes materials; c) Teacher Approval (TA) which discloses the student's general impression of his/her teachers; and d) Educational Acceptance (EA), which is a representation of the student's agreement with the expressed goals of education. (p. 425)

Three additional measures are produced from the Survey of Study Habits and Attitudes. The summation of the Delay Avoidance and Work Methods subscales yields a Study Habits (SH) score, which reveals behavior associated with academic work and use of study techniques; and the summation of the Teacher Approval and Educational Acceptance subscales yields a Study Attitudes (SA) score, which focuses on opinions and beliefs regarding academics and teachers. The summation of the Study Habits and Study Attitudes scores yields an overall Study Orientation (SO) score.

The Survey of Study Habits and Attitudes has been widely used in research where study habits and attitudes were dependent variables. The Survey of Study Habits and Attitudes appears to have adequate reliability and validity and is useful as a research

tool (Buros, 1978). Validity of the Survey of Study Habits and Attitudes has been computed using one-semester GPA as the criterion. GPA was correlated with the Survey of Study Habits and Attitudes using 1,772 cases for analysis. Validity coefficients ranged from .25 to .45 with a weighted average of .36. Weighted averages of sub-scale intercorrelations ranged from .49 to .71 , and test-retest reliabilities calculated at 4 and 14 week intervals varied from .83 to .94 (Brown and Holtzman, 1967).

Analysis of Data

Univariate statistics (means and standard deviations) were calculated for all variables. Frequency counts for demographic data, including size of hometown, high school enrollment, enrollment in Vocational Agriculture, school transfers, grade level, occupational goals and student teaching were computed. Selected demographic variables were also used in other analyses. Scores from the Survey of Study Habits and Attitudes (Delay Avoidance, Work Methods, Teacher Approval, Educational Acceptance, Study Habits, Study Attitudes, and Study Orientation) and occupational goals were considered dependent variables and were

placed into a correlation matrix along with several independent variables (age, demographic variables, perception of importance of study skills instruction in teaching secondary Vocational Agriculture, perception of qualifications to teach study skills, and instruction in study skills). Independent variables were obtained from a survey which subjects completed along with the Survey of Study Habits and Attitudes. Three variables: perceived importance of study skills instruction in secondary schools, instruction in study skills and perception of qualification to teach study skills, each consisted of five separate items from the survey which were combined to provide an overall score.

One-way analysis of variances (ANOVA's) were calculated to determine whether any significant difference existed between grade levels on measures of perceived qualification to teach study skills, perception of the importance of study skills instruction, and scores on the Survey of Study Habits and Attitudes. The .05 alpha level was chosen. T-tests were also calculated to determine if any significant differences on Survey of Study Habits and Attitudes scores, perceived importance of study skills, and perceived qualification to teach study skills

existed between subjects who had received study skills instruction, subjects who had not, and between subjects with different occupational goals.

A stepwise regression analysis was calculated to determine the contribution of selected variables to explaining the variance in perceived qualification to teach study skills. A stepwise regression analysis was also performed to determine the contribution of selected variables to predicting the variance in perceived importance of study skills.

Statistical analysis of the data was made utilizing the Statistical Package for the Social Sciences (SPSS), (Fry, 1986) at the Kansas State University Computing Center.

CHAPTER IV

ANALYSIS AND INTERPRETATION OF DATA

Introduction

Data presented in this chapter discloses the findings of two survey instruments assessing the study habits and attitudes of undergraduate students in Agricultural Education at Kansas State University. The information and findings from this study are reported as follows:

1. Demographic data;
2. Scores on the Survey of Study Habits and Attitudes (SSHA) and the Study Attitudes Survey (SAS);
3. Demographic data, Survey of Study Habits and Attitudes scores and Study Attitudes Survey items.

Demographic Data:

Demographic data were collected on each subject in order to determine whether any demographic variables were related to scores on the Survey of Study Habits and Attitudes, perceived importance of study skills, perceived qualification to teach study skills and instruction in study skills. These data also helped categorize and identify the population used in this study. Results of further analyses of demographic data will be reported later in Chapter IV.

The ages of the subjects ranged from 19 to 38, with a mean age of 22. A large majority of the subjects (94 %) were male.

Subjects were asked to report the size of their hometown. Table 3 reports this data. Inspection of the table reveals that 34 % of the subjects reported coming from a farm or ranch and 38 % reported coming from small towns (population 1,001 - 10,000). Nineteen percent were from very small towns (population less then 1,000) while nine percent reported being from towns with populations from 10,000 to 50,000. No subjects reported coming from a town with a population over 50,000. A large majority (72 %) come from farms

or small towns. These data would approximate a normal distribution.

Table 3

Size of Hometown that Subjects Reported

Size of hometown	Number	Percent
Farm/Ranch	18	34.0
0 - 100	1	2.0
101 - 500	3	6.0
501 - 1000	6	11.0
1001 - 10000	20	38.0
10001 - 50000	5	9.0
50000 +	0	0.0
Total	53	100.00

Note. N = 53

Table 4 reports socioeconomic status of subjects. The vast majority of subjects (92 %) fell into Classes III and IV of Hollingshead's Two Factor Index of Social Position. These two classes generally are identified

Table 4

Socioeconomic Status of Subjects According to Hollingshead's Two Factor Index of Social Position

Class	Number	Percent
I	0	0.0
II	3	6.0
III	24	46.0
IV	24	46.0
V	1	2.0
Total	52	100.0

Note. N = 52

as "middle class". Six percent of the subjects fell into Class II. This class is generally defined as "upper middle class". The findings on socioeconomic status are similar to those of Parmley (1980), who found that 89 % of subjects were classified in Classes III, IV, and V. This study found that 94 % of the subjects were classified into Classes III, IV, and V. Two percent of the subjects fell into Class V, which is generally considered "lower middle class". One subject did not report any data on this variable. These data would approximate a normal distribution.

Enrollment at high schools subjects attended is reported in Table 5. As indicated in Table 5, over half (57 %) of the subjects attended high schools with less then 300 students. Eighty-one percent attended high schools with less then 500 students. Six percent of subjects attended high schools with more than 900 students.

Table 5

Enrollment at High Schools which Subjects Attended

Size of enrollment	Number	Percent
0 - 100	9	17.0
101 - 300	21	40.0
301 - 500	12	24.0
501 - 700	6	11.0
701 - 900	1	2.0
> 900	3	6.0
Total	52	100.0

Note. N = 52

The majority of subjects in this study have been enrolled in Vocational Agriculture at the secondary level. Table 6 reveals that 79 % of the subjects have

Table 6

Subject's Enrollment in Vocational Agriculture at the Secondary Level

Enrollment Status	Number	Percent
Never enrolled	11	21.0
Enrolled for:		
1 year	1	2.0
2 years	1	2.0
3 years	5	9.0
4 years	35	66.0
Total	53	100.0

Note. N = 53

had classes in Vocational Agriculture in high school. Twenty-one percent of the population had never been

enrolled in Vocational Agriculture. Sixty-six percent of the subjects had taken four years of secondary Vocational Agriculture, while 13 % had taken 3 years or less. These data are similar to a study by Reilly (1979) in which 72.5 % of Vocational Agriculture teachers in Kansas reported having experience in high school Vocational Agriculture.

Table 7 reports the average enrollment in secondary Vocational Agriculture programs in which subjects were enrolled. The majority (52 %) of programs had between 26 and 50 students. Forty-eight percent of the programs were reported as having over 50 students enrolled. No subjects reported coming from a programs with less then 25 students. Similar findings are noted in follow-up studies of Kansas State University Agricultural Education graduates (Welton, 1986). Over nine years (1977 - 1985), 61.30 % of first-year teachers reported enrollment in Vocational Agriculture programs was less than 50 students, and 23.80 % of first-year teachers reported enrollment between 50 and 74 students. Thus, it appears that subjects in the study tended to come from the larger Vocational Agriculture programs in the state of Kansas.

Table 7

Enrollment in Secondary Vocational Agriculture Programs where Subjects were Enrolled

Number of students enrolled	Number	Percent
0 - 25	0	0.0
26 - 50	22	52.0
51 - 75	12	29.0
76 - 100	4	9.5
> 100	4	9.5
Total	42	100.0

Note. N = 42

Sixty-four percent of the subjects had transferred from another school to Kansas State University. All but one of the subjects who transferred did so from a

community college. One subject had transferred from another four-year school. Table 8 reports these data.

Table 8

Transfer Status of Subjects

Transfer status	Number	Percent
Non-transfer	19	36.0
Transfer[a]	34	64.0
Total	53	100.0

Note. [a]33 community college transfers, one 4-year college transfer $N = 53$

A large majority of the subjects reported that they plan to teach agriculture at either the secondary or postsecondary level. As indicated by Table 9, 79 % of the subjects indicated they would like to teach. The remaining 21 % did not plan to teach. The

percentage of individuals planning to teach is slightly higher than that of other studies. McCoy and Mortensen (1983) reported that over five years (1975-1980) 60.78 % of Agricultural Education graduates entered the teaching field. Follow-up studies of Kansas State University Agricultural Education graduates (Welton, 1986) found that 50.88 % of graduates entered the teaching field.

Table 9

Occupational Goals of Subjects

Occupational goal	Number	Percent
Teaching agriculture	41	79.0
Not teaching agriculture	12	21.0
Total	53	100.0

Note. N = 53

The majority of the subjects (79 %) had not completed student teaching at the time of this study. However, 21 % had already completed their student teaching. Table 10 reports these data. Of the 11 subjects who had completed student teaching, eight indicated they plan to teach.

Table 10

Number of Subjects Who had Completed Student Teaching

Student teaching status	Number	Percent
Had already student taught	11	21.0
Had not student taught	42	79.0
Total	53	100.0

Note. N = 53

A profile of the average subject who participated in this study emerges. This profile is reported in Table 11. The majority of the subjects were male and approximately 22 years old.

Table 11

Profile of Subjects' Characteristics

Characteristic	Number	Percent
Hometown		
(Farm/Ranch)	18	34.0
(Small town)	20	38.0
Socioeconomic Status[a]		
(Class III)	24	46.0
(Class IV)	24	46.0
H.S. Enrollment		
(< 500)	42	81.0
Enrollment in[b] Vocational Agriculture	42	79.0
Number enrolled in[b] subject's Vocational Agriculture program		
(26-75)	34	81.0
Transfer status		
(transferred)	34	64.0
Occupational goals		
(plan to teach)	41	79.0
Student teaching		
(not completed)	42	79.0

Note. [a] $n = 52$. [b] $n = 42$ $N = 53$

Scores on the Survey of Study Habits and Attitudes and the Study Attitudes Survey

Students were asked to respond to a series of survey items which assessed subjects' perceptions of: the importance of study skills, perceived qualification to teach study skills, and instruction in study skills.

Tables 12-14 show the means and standard deviations for the Likert-type items on the Study Attitudes Survey (SAS). The first ten items (Tables 12 and 13) used a five point scale with 1 being labelled "Strongly Disagree" and 5 being labelled "Strongly Agree". On the first ten items, means above three would indicate agreement with an item; those means below three would indicate disagreement with an item.

The first five items (Table 12) assessed the perceptions that subjects have of the importance of study skills. The data in Table 12 show that subjects generally agreed that they would like to take a course in study skills in college (SSIMP1), with a mean of 3.37. Subjects also agreed that study skills instruction should be included in college courses (SSIMP2), with a mean of 3.75. On the item which asked whether subjects thought study skills should be included in high school courses (SSIMP3), they tended

to strongly agreed with a mean of 4.37. Subjects agree that study skills are important for student success in high school (SSIMP4), with a mean of 3.73, although the standard deviation was moderately high (1.07) for the item. Subjects tended to agree that teaching study skills was an important part of high school Vocational Agriculture (SSIMP5), with a mean of 3.63. On an overall score which represented the five items combined (SSIMPT), the mean was 3.76. Generally, subjects agreed that study skills are important in high school, college, and in Vocational Agriculture. These results are consistent with Paolino (cited in Stoodt and Balbo, 1979), who stated that teachers do recognize the importance of study skills.

The second five items (Table 13), assessed the perceptions that subjects have of their qualification to teach study skills. The results are shown in Table 13. On the first item (SSQ1), which asked subjects if they would be qualified to teach study skills in high school upon graduation from college, subjects agreed that they would be with a mean of 3.43. Subjects tended to disagree that the Agricultural Education curriculum at Kansas State University prepared them to teach study skills (SSQ2), with a mean of 2.88.

Table 12

Items from the Study Attitudes Survey
which assess the Perception of Importance of Study Skills

Item		Mean	Standard Deviation
Importance			
SSIMP1.	I would like to take a course in college that teaches study skills.	3.37	.925
SSIMP2.	Study skills instruction should be included in college courses.	3.75	.875
SSIMP3.	Study skills instruction should be included in high school courses.	4.37	.837
SSIMP4.	Study skills are important for student success in high school.	3.73	1.070
SSIMP5.	Teaching study skills is an important part of teaching secondary Vocational Agriculture.	3.63	.971

Note. N = 53

Table 13

Items from the Study Attitudes Survey which assess the Perception of Qualification to teach Study Skills

Items		Mean	Standard Deviation
Qualification			
SSQ1.	I will be qualified to teach study skills in high school Vocational Agriculture upon graduation from KSU.	3.43	1.040
SSQ2.	The Agricultural Education curriculum at Kansas State prepares graduates to teach study skills in high school Vocational Agriculture.	2.88	.970
SSQ3.	As a high school Vocational Agriculture teacher, I would include study skills instruction in the classes I taught.	3.71	.769
SSQ4.	I use good study habits as a student at KSU.	3.39	1.020
SSQ5.	I use good study skills as a student at KSU.	3.67	.850

Note. N = 53

Subjects agreed that they would include study skills instruction in classes that they taught (SSQ3), with a mean of 3.71. When asked if they used good study habits at college (SSQ4), subjects agreed with a mean of 3.39. Subjects also agreed that they used good study skills at college (SSQ5), with a mean of 3.67. On an overall score which represented the five items combined (SSQUAL), the mean was 3.42. Thus, subjects felt qualified to teach study skills, even though they did not generally believe that the Agricultural Education curriculum prepared them to be qualified. These results appear contradictory to those of Paolino (cited in Stoodt and Balbo, 1979) and Stoodt and Balbo (1979), who both suggested that teachers feel inadequately prepared to teach study skills. It is possible that subjects who have been able to maintain acceptable grades at college believe that they already possess good study skills and are therefore qualified to teach such skills.

The final five items (Table 14), assessed the instruction that subjects had received in study skills in classes they had taken. The results are reported in Table 14. The descriptors for these items were changed to 1 = "Rarely" to 5 = "Almost Always". Items

Table 14

Items from the Study Attitudes Survey which assess Instruction on Study Skills

Items		Mean	Standard Deviation
Instruction			
SSINS1.	Teachers explained about study skills in high school.	2.17	.955
SSINS2.	Teachers explained about study habits in high school.	2.41	.865
SSINS3.	I use materials which explain about study skills and habits in college.	2.20	.968
SSINS4.	Teachers explain about study habits in college courses.	2.84	1.060
SSINS5.	Teachers explain about study skills in college courses.	2.58	1.060

Note. N = 53

with a mean above 3.0 would indicate that subjects tended to receive instruction, items with a mean below 3.0 would indicate that subjects tended not to receive instruction. Subjects tended not to have received explanations about study skills in high school (SSINS1), with a reported mean of 2.17. Subjects also tended not to have received explanations about study habits in high school (SSINS2). Here a mean of 2.41 was disclosed. On the item which asked whether subjects used materials which explained about study skills and habits in college (SSINS3), subjects tended not to use such materials with a reported mean of 2.20. Subjects also tended not to receive explanations about study habits and study skills in college (SSINS4, SSINS5), with means of 2.84 and 2.58, respectively. On an overall score which represented the five items combined (SSINS), the mean was 2.44. These data indicate that subjects generally did not receive a great deal of instruction on study skills and study habits, nor did they use materials explaining about study skills and study habits. These findings are consistent with those of Stoodt and Balbo (1979), who stated that secondary teachers have not had

opportunities to acquire knowledge regarding study skills instruction in their area of specialization.

Reliability analyses were computed on the three overall scores coming from the Study Attitudes Survey (SSIMPT, SSQUAL and SSINS). Reliability was computed using Cronbach's Alpha Model (Cronbach, 1951). The first scale, SSIMPT, had a reliability coefficient of .6587. The second scale, SSQUAL, had a reliability coefficient of .7998. The third scale, SSINS, had a reliability coefficient of .6802.

Intercorrelations between items assessing the importance of study skills are reported in Table 15. Inspection of the table reveals that several items are significantly correlated. The data reveal that subjects' perceptions of the importance of study skills in college (SSIMP1 and SSIMP2) are positively correlated with each other. The first item (SSIMP1), which assessed the subject's desire to take a course in study skills was highly correlated at the .0005 level of significance with the second item (SSIMP2), which asked subjects whether they thought that study skills instruction should be included in college courses. Perceptions of the importance of study skills in college (SSIMP1, SSIMP2), were not correlated with

perceptions of the importance of study skills in high school (SSIMP3, SSIMP4). The third item (SSIMP3), which asked subjects whether they thought study skills instruction should be included in high school courses, was correlated at the .001 level of significance with item four (SSIMP4), which asked subjects whether they thought that study skills were important for student success in high school. SSIMP4 was also correlated at the .0005 level of significance with item five (SSIMP5), which asked subjects if they believed study skills instruction is an important part of high school Vocational Agriculture. These results suggest that subjects who feel that study skills instruction should be included in high school courses also feel that teaching study skills is important in secondary Vocational Agriculture. The overall score on the five items (SSIMPT), was significantly correlated with all five items at the .0005 level of significance.

Table 15

Intercorrelation of SAS Items

SAS variables	SAS variables[a]					
	SSIMP1	SSIMP2	SSIMP3	SSIMP4	SSIMP5	SSIMPT
SSIMP1	1.0					
SSIMP2	.52**	1.0				
SSIMP3	.11	.20	1.0			
SSIMP4	.19	.09	.41*	1.0		
SSIMP5	.17	.18	.17	.62**	1.0	
SSIMPT	.58**	.57**	.56**	.76**	.68**	1.0

Note. * $p < .001$. ** $p < .0005$

SAS = Study Attitudes Survey [a]See Table 12 for description of SAS variables

$N = 53$.

Intercorrelations of the items assessing qualification to teach study skills are presented in Table 16. As shown by the table, several significant correlations were found. The data show that item one (SSQ1), which asked subjects how qualified they would be to teach study skills in high school Vocational Agriculture upon graduation, was moderately correlated at the .05 level of significance with item 4 (SSQ4), which asked subjects if they used good study habits at college. SSQ1 was also moderately correlated at the .05 level of significance with item five (SSQ5), which asked subjects if they used good study skills in college. These data suggest that the perception of having good study habits and study skills in college is important to feeling qualified to teach study skills. Item two (SSQ2), which asked subjects if the Agricultural Education curriculum prepared them to teach study skills, was moderately correlated at the .05 level of significance with item four (SSQ4), which assessed subjects' study habits in college. Item three (SSQ3), which asked subjects if they would include study skills instruction in classes they taught was significantly correlated at the .001 level of significance with SSQ4. This would suggest that having

Table 16

Intercorrelation of SAS Items

SAS variables	SAS variables[a]					
	SSQ1	SSQ2	SSQ3	SSQ4	SSQ5	SSQUAL
SSQ1	1.0					
SSQ2	.50	1.0				
SSQ3	.51	.57	1.0			
SSQ4	.23*	.25*	.41**	1.0		
SSQ5	.39*	.44	.50	.72	1.0	
SSQUAL	.71	.74	.78	.70	.81	1.0

Note. * $p \leq .05$. ** $p \leq .001$. (all other variables: $p \leq .0005$)

SAS = Study Attitudes Survey [a]See Table 13 for description of SAS variables

N = 53

good personal study habits is important to teaching study skills in secondary Vocational Agriculture. All other variables were significantly correlated ($p < .0005$) with each other. These data suggest that the perception of being qualified to teach study skills is related to the perception of having good study skills and habits.

Intercorrelations between items assessing instruction in study skills are presented in Table 17. The table reveals several significant correlations. Item one (SSINS1), which assessed instruction about study skills in high school, was highly correlated at the .0005 level of significance with item two (SSINS2), which assessed instruction in study habits in high school. SSINS1 was also moderately correlated at the .05 level of significance with item four (SSINS4), which assessed instruction on study habits in college courses. SSINS1 was moderately correlated at the .05 level of significance with item five (SSINS5), which assessed instruction on study skills in college courses. Item three (SSINS3), which asked subjects if they used materials which explained about study skills and habits in college, was moderately correlated at the

Table 17

Intercorrelation of SAS Items

SAS variables	SAS variables[a]					
	SSINS1	SSINS2	SSINS3	SSINS4	SSINS5	SSINS
SSINS1	1.0					
SSINS2	.70***	1.0				
SSINS3	.10	.03	1.0			
SSINS4	.32*	.13	.29*	1.0		
SSINS5	.27*	.02	.42**	.70***	1.0	
SSINS	.70***	.52***	.56***	.76***	.76***	1.0

Note. * $p \leq .05$. ** $p \leq .001$.
*** $p \leq .0005$
SAS = Study Attitudes Survey [a]See Table 14 for descriptions of SAS variables
$N = 53$

.05 level of significance with SSINS4. SSINS3 was also significantly correlated with SSINS5 at the .001 level of significance. SSINS4 was highly correlated with SSINS5 at the .0005 level of significance. The item which represented all of the items (SSINS) was highly significantly correlated ($p < .0005$) with all of the individual items. These results suggest that subjects who received instruction on study skills in high school also received instruction on study skills in college. Subjects who received study skills instruction in college courses also received instruction on study habits in college courses. However, these results should be considered in light of the findings which show that subjects did not receive a great deal of instruction in study skills and study habits in either high school or college.

Items from different scales on the Study Attitudes Survey (SAS) were entered into correlation matrices. Several significant correlations were found between selected variables. Items which assessed the importance of study skills were correlated with items which assessed qualification to teach study skills. This suggests that subjects who perceive study skills as being important in high school and college also feel

qualified to teach study skills. These results are reported in Table 18. The third item assessing importance (SSIMP3), which asked subjects if study skills instruction should be included in high school courses was moderately correlated at the .05 level of significance with the third item assessing qualifications (SSQ3), which asked subjects if they would include instruction in courses they taught. The third item assessing importance (SSIMP3), which asked subjects if they thought study skills instruction should be included in high school classes, was also correlated at the .05 level of significance with item four assessing qualification (SSQ4), which asked subjects about their study habits in college . The fourth item assessing importance (SSIMP4), which asked if study skills were important for student success in

Table 18

Correlation of SAS Items

SAS variables	SAS variables[a]					
	SSIMP1	SSIMP2	SSIMP3	SSIMP4	SSIMP5	SSIMPT
SSQ1	-.11	-.02	.07	-.08	.04	-.02
SSQ2	-.07	.05	-.04	.08	.05	.02
SSQ3	.01	.15	.22*	.18	.24*	.24*
SSQ4	.001	.13	.24*	.39**	.31*	.36**
SSQ5	-.16	.04	.11	-.01	.04	-.001
SSQUAL	-.09	.09	.16	.15	.18	.16

Note. * $p \leq .05$. ** $p \leq .01$

SAS = Study Attitudes Survey [a]See Tables 12 and 13 for descriptions of SAS variables

N = 53

high school, was significantly related at the .01 level of significance to item four assessing qualification (SSQ4). The fifth item assessing importance (SSIMP5), which asked subjects if teaching study skills was an important part of instruction in high school Vocational Agriculture, was correlated with item three assessing qualification (SSQ3), at the .05 level of significance, and with item four (SSQ4), at the .05 level of significance. The overall score combining all five items (SSIMPT), was significantly moderately related to the third item assessing qualification (SSQ3), at the .05 level of significance and to the fourth item assessing qualification (SSQ4), at the .01 level of significance. These results lead to the possible conclusion that perceived qualification to teach study skills is related to the perception that study skills instruction should be included in high school courses and that study skills are important for student success in high school.

Items assessing perceived qualification to teach study skills were correlated with items assessing instruction in study skills. These results are presented in Table 19. The data show that several significant relationships exist between these

Table 19

Correlation of SAS Items

SAS variables	SAS variables[a]					
	SSQ1	SSQ2	SSQ3	SSQ4	SSQ5	SSQUAL
SSINS1	-.15	.04	.01	.10	.21	.05
SSINS2	-.11	.12	.09	.07	.13	.07
SSINS3	.13	.33**	.15	.10	.17	.24*
SSINS4	.09	.26*	.39**	.12	.26*	.29**
SSINS5	.06	.36**	.39**	.24*	.14	.31**
SSINS	.01	.34**	.32**	.20	.28*	.30**

Note. * $p \leq .05$. ** $p \leq .01$

SAS = Study Attitudes Survey [a]See Tables 13 and 14 for description of SAS variables

N = 53

variables. The second item assessing qualification (SSQ2), which asked subjects if the Agricultural Education curriculum prepared them to teach study skills, was related at the .01 level of significance to item three assessing instruction (SSINS3), which asked subjects if they used materials which explained about study skills and habits in college . This second item assessing qualification (SSQ2), was also correlated with SSINS3, SSINS4, and SSINS5, at the .01 ,.05, and .01 levels of significance, respectively. Item three assessing qualification (SSQ3), was correlated at the .01 level of significance with items assessing instruction on study skills (SSINS4), and study habits (SSINS5), in college . SSQ4, which asked about study habits in college, was moderately correlated with SSINS5 at the .05 level of significance. Item five assessing qualification (SSQ5), which asked subjects whether they used good study skills in college, was related to the item assessing instruction on study habits in college (SSINS4), at the .01 level of significance and the combined score of all items assessing intruction in study skills (SSINS), at the .05 level of significance. SSQUAL was related to several items assessing instruction. This variable was

correlated with items assessing study skills and habits in college (SSINS4 and SSINS5) at the .01 level of significance. These results suggest that instruction in study skills and study habits in college and the use of materials explaining about study skills and study habits is related to perceived qualification to teach study skills.

Items assessing intruction in study skills were correlated with items assessing the importance of study skills. These results are reported in Table 20. Inspection of the table reveals that several variables are significantly correlated with each other. SSINS1, which assesses instruction on study skills in high school, was moderately negatively correlated at the .05 level of significance with SSIMP1, which asked subjects if they would like to take a course in study skills in college. SSINS2, which asked subjects about instruction on study habits in high school was also moderately negatively correlated at the .05 level of significance with SSIMP1. These correlations tend to indicate that subjects who received little instruction in study skills and study habits in high school perceive study skills instruction in college as being very important. Subjects' perception of the importance

Table 20

Correlation of SAS Items

SAS variable	SAS variable[a]					
	SSINS1	SSINS2	SSINS3	SSINS4	SSINS5	SSINS
SSIMP1	-.26*	-.24*	.06	-.15	-.13	-.21
SSIMP2	-.08	-.21	.19	.02	.13	.02
SSIMP3	.03	-.03	.09	-.04	.07	.03
SSIMP4	.06	-.02	-.25*	.06	.40***	.23*
SSIMP5	.006	-.06	.15	.17	.37**	.20
SSIMPT	-.06	-.16	.26*	.06	.30**	.13

Note. * $p \leq .05$. ** $p \leq .01$
*** $p \leq .001$
SAS = Study Attitudes Survey [a]See Tables 12 and 14 for description of SAS variables
N = 53

of study skills to student success in high school and in teaching study skills in secondary Vocational Agriculture may be increased as subjects receive more instruction in study skills and study habits in college. SSINS3, which asked subjects about their use of materials which explain about study skills and habits, was negatively correlated at the .05 level of significance with SSIMP4, which asked students if they thought study skills were important for student success in high school. SSINS5, which asked subjects about instruction in study skills in college, was highly correlated at the .001 level of significance with SSIMP4, at the .01 level of significance with SSIMP5 and at the .01 level of significance with SSIMPT. SSINS, which represents the combination of all the items assessing instruction, was moderately correlated with SSIMP4 at the .05 level of significance.

Scores on the Survey of Study Habits and Attitudes (SSHA) are shown in Table 21. Percentiles based on norms for college freshman are also reported. Although the means of the Survey of Study Habits and Attitudes scores reported in this study compared favorably with those of other studies (Gadzella, 1979; Gadzella, Goldston, and Zimmerman, 1979; McCausland and Stewart,

Table 21

Mean Scores and Standard Deviations of the Survey of Study Habits and Attitudes Scores

SSHA Scale	Mean	Standard Dev.	Percentile[a]
Delay Avoidance (DA)	22.01	9.25	50
Work Methods (WM)	25.56	8.71	45
Study Habits (SH)	47.58	15.70	45
Teacher Approval (TA)	26.90	8.37	40
Educational Acceptance (EA)	25.69	7.71	25
Study Attitudes (SA)	52.60	14.57	40
Study Orientation (SO)	100.20	27.64	45

Note. [a]norms for college freshman (based on 4579 cases for eight four year colleges)

SSHA = Survey of Study Habits and Attitudes

N = 53

1974; Robyak and Downey, 1979; Tarpey and Harris, 1979), the percentiles for all scores except Delay Avoidance were below 50. Intercorrelations between Survey of Study Habits and Attitudes scales are shown in Table 22. All of the items were highly significantly correlated at the .0005 level of

Table 22

Intercorrelation of SSHA Scores

SSHA scores	SSHA scores[a]						
	WM	DA	TA	EA	SH	SA	SO
WM	1.0						
DA	.52	1.0					
TA	.49	.37*	1.0				
EA	.56	.69	.64	1.0			
SH	.86	.88	.49	.72	1.0		
SA	.57	.58	.91	.89	.66	1.0	
SO	.79	.80	.76	.88	.91	.90	1.0

Note. * $p \leq .01$ (All other correlations: $p \leq .0005$)
SSHA = Survey of Study Habits and Attitudes [a]See Table 21 for description of SSHA scores $N = 53$

significance except the correlation between the subscales Delay Avoidance (DA) and Teacher Acceptance (TA), which were correlated at the .01 level of significance. The correlations ranged from .37 to .91. These results are similar to those of Brown and Holtzman (1967), who found correlations between the Survey of Study Habits and Attitudes scores ranging from .49 to .93.

Table 23 reports correlations between Study Attitudes Survey items and Survey of Study Habits and Attitudes scores. A small number of significant correlations were found. The second item assessing the importance of study skills (SSINS2), which asked subjects about the importance of including study skills instruction in college courses, was moderately correlated at the .05 level of significance with Delay Avoidance scores, Educational Acceptance scores, Study Attitudes scores, and Study Orientation scores . These results suggest that the inclusion of study skills instruction in college courses is in accordance with the goals of education. The third item assessing qualification to teach study skills (SSQ3), which asked subjects if they would include study skills instruction in the classes they taught, was moderately correlated at the .05 level of significance with Work Methods scores. The third item assessing instruction in study skills (SSINS3), which asked

subjects about their use of materials which explained about study skills and study habits, was moderately negatively correlated at the .05 level of significance with Educational Acceptance scores, Study Attitudes scores, and Study Orientation scores. The overall combination of the items assessing instruction in study skills (SSINS) was moderately negatively correlated at the .05 level of significance with Delay Avoidance scores and Educational Acceptance scores. Perhaps subjects feel competent enough in their study skills and study habits so they view the use of such materials and continuing instruction in study skills as wasteful of their time and to reflect negatively on the teacher.

Table 23

Correlation of SAS and SSHA Scores

SAS variables[a]	SSHA scores[b]						
	WM	DA	TA	EA	SH	SA	SO
SSIMP1	-.08	.08	-.06	.11	.004	.02	.01
SSIMP2	.14	.23*	.18	.26*	.21	.24*	.25*
SSIMP3	-.03	.06	-.12	-.04	.02	-.09	-.03
SSIMP4	-.11	-.06	-.12	-.04	-.10	-.09	-.10
SSIMP5	.10	-.002	-.01	.09	.05	.04	.05
SSIMPT	-.04	.05	-.05	.08	.007	.01	.01
SSQ1	.08	.08	.13	-.01	.09	.07	.09
SSQ2	-.003	.04	-.01	-.12	.02	-.07	-.02
SSQ3	.22*	.12	-.004	-.04	.19	-.02	.10
SSQ4	.04	.16	-.16	.14	.12	-.01	.06
SSQ5	.12	.14	-.08	.05	.15	-.02	.10
SSQUAL	.11	.14	-.03	.009	.15	-.01	.07
SSINS1	.10	-.13	-.02	-.10	-.02	-.06	-.04
SSINS2	.19	-.15	.10	-.06	.02	.02	.02
SSINS3	-.17	-.09	-.16	-.25*	-.14	-.23*	-.20*
SSINS4	.04	-.15	-.07	-.14	-.07	-.11	-.10
SSINS5	.009	-.21	-.19	-.18	-.12	-.21	-.18
SSINS	.04	-.22*	-.11	-.22*	-.10	-.18	-.15

Table 23, cont.

Correlation of SAS and SSHA Scores

Note. * $p \leq .05$

SSHA = Survey of Study Habits and Attitudes SAS = Study Attitudes Survey [a]See Tables 12-14 for description of SAS variables [b]See Table 21 for description of SSHA variables

N = 53

Demographic data, Survey of Study Habits and Attitudes Scores and Study Attitudes Survey Items

Demographic variables were entered into several correlation matrices to determine if any variables were related to Study Attitudes Survey and Survey of Study Habits and Attitudes scores.

Demographic variables were correlated with scores from the Survey of Study Habits and Attitudes. These results are shown in Table 24. No significant correlations were found. The absence of any significant relationships between these scores suggests that demographic characteristics have little to do with any of these items.

Table 24

Correlation of Demographic Variables with SSHA Scores

Demographic Variables	SSHA scores[a]						
	WM	DA	TA	EA	SH	SA	SO
AGE	.05	-.13	.02	.03	-.04	.03	-.01
GRADE	-.20	.11	.10	.14	-.04	.14	.04
SES	.004	-.03	-.17	-.06	-.01	-.13	-.02
VAYRS	-.02	-.09	-.12	-.13	.06	-.14	-.11
HS NUMBER	-.03	-.19	.09	-.15	-.13	-.02	-.09
VA NUMBER	.11	-.22	-.01	-.06	-.07	-.04	-.06

Note. (all correlations non-significant)

SSHA = Survey of Study Habits and Attitudes [a]See Table 21 for descriptions of SSHA variables N = 53

Demographic variables were entered into a correlation matrix along with items assessing the importance of study skills. These results are shown in table 25. Inspection of the table reveals that several

Table 25

Correlation of Demographic Variables with SAS Items

Demographic variables	SAS variables[a]					
	SSIMP1	SSIMP2	SSIMP3	SSIMP4	SSIMP5	SSIMPT
AGE	.28*	.21	-.06	.07	.15	.20
GRADE	.22	.18	.21	.06	-.02	.17
VAYRS	.08	-.05	-.00	.08	-.24	-.09
SES	.14	-.004	.01	-.03	-.05	.003
HSNUMBER	.07	-.01	-.36**	-.33**	-.13	-.21
VANUMBER	.22	.15	-.16	.10	.16	.15

Note. * $p \leq .05$. ** $p \leq .01$

SAS = Study Attitudes Survey [a]See Table 12 for description of SAS variables $N = 53$

significant correlations exist. SSIMP1, which asked subjects if they would like to take a course in study skills in college, was moderately correlated at the .05 level of significance with age. This suggests that as subjects become older, they recognize more fully the value of concentrated instruction in study skills and study habits. SSIMP3 and SSIMP4 were negatively correlated with the number of students in subjects' high schools (HSNUMBER) at the .01 level of significance and the .05 level of significance, respectively.

Demographic variables were entered into a correlation matrix along with items assessing perceived qualification to teach study skills. The data in Table 26 reveal a significant moderate negative correlation at the .05 level of significance between grade level and an item assessing whether the subjects thought the Agricultural Education curriculum prepared graduates to teach study skills in high school Vocational Agriculture (SSQ2). This relationship suggests that underclassmen base their decision about the Agricultural Education curriculum mainly on their initial perceptions, the upperclassmen, on their experiences. A significant moderate negative

Table 26

Correlation of Demographic Variables with SAS Items

Demographic variables	SAS variables[a]					
	SSQ1	SSQ2	SSQ3	SSQ4	SSQ5	SSQUAL
AGE	-.06	.007	.16	.29*	.15	.14
GRADE	-.02	-.25*	-.23*	-.05	-.21	-.19
VAYRS	.008	-.05	-.18	-.14	.005	-.09
SES	-.20	-.05	.12	-.03	-.13	-.09
HSNUMBER	.007	.01	-.07	-.21	-.08	-.09
VANUMBER	-.09	.13	.24	.18	.25	.17

Note. * $p \leq .05$

SAS = Study Attitudes Survey [a]See Table 13 for description of SAS variables

N = 53

correlation at the .05 level of significance was indicated between grade level and a item assessing whether the subject would include study skills instruction in the classes they taught (SSQ3). Perhaps underclassmen (who finished high school more recently), feel more compelled to provide study skills instruction in high school. A significant moderate correlation at the .05 level of significance was indicated between age and an item assessing the use of good study habits in college (SSQ4).

Table 27 shows correlations between item assessing instruction in study skills and demographic variables. The results show several significant correlations. Age was moderately correlated at the .05 level of significance with SSINS3, which suggests that as subjects get older, they tend to use materials which explain about study skills and study habits more often. Age was also correlated at the .05 level of significance with SSINS5, which asked subjects about study skills instruction in college. Age was moderately correlated with SSINS at the .05 level of significance. Grade level was negatively correlated at the .05 level of significance with SSINS1 and SSINS2, which assessed instruction in study skills and study

Table 27

Correlation of Demographic Variables with SAS Items

Demographic variables	SAS variables[a]					
	SSINS1	SSINS2	SSINS3	SSINS4	SSINS5	SSINS
AGE	.12	.13	.26*	.15	.24*	.27*
GRADE	-.31**	-.40***	-.11	-.31**	-.21	-.40***
VAYRS	.07	.05	.16	-.13	-.28*	-.05
SES	-.02	-.09	.04	.05	.12	.04
HSNUMBER	-.10	-.009	.07	-.05	-.08	-.05
VANUMBER	.27*	.30*	.40**	.28*	.31*	.42***

Note. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$

SAS = Study Attitudes Survey [a]See Table 14 for description of SAS variables

N = 53

habits in high school. Grade level was negatively correlated at the .01 level of significance with SSINS4, which suggests that as subjects spend longer amounts of time in school they have received more instruction in study skills. Grade level was also negatively correlated with SSINS at the .001 level of significance.

Years of enrollment in Vocational Agriculture (VAYRS) was negatively correlated at the .05 level of significance with SSINS5. Student enrollment in Vocational Agriculture (VANUMBER) was significantly correlated with all items assessing instruction in study skills. These results suggest that, perhaps, with larger class numbers, teachers feel compelled to help poorer students by explaining about examinations and assignments in more detail to classes.

A number of t-tests and Analyses of Variance (ANOVA's) were computed to determine if any significant differences existed between groups. Scores on the Survey of Study Habits and Attitudes were analyzed by comparing the mean scores of each grade level (Freshman, Sophomore, Junior and Senior) using a one-way analysis of variance (ANOVA).

In that the number of subjects in each grade level was unequal, the freshmen and sophomore grade levels were combined and the senior grade level was weighted by a factor of .34. This procedure resulted in nearly equal numbers of subjects in each grade level.

ANOVA's were computed in order to determine if any significant differences existed among grade levels on scores on the Survey of Study Habits and Attitudes. No significant results were found. Results of the ANOVA's computed on grade level and Survey of Study Habits and Attitudes scores are presented in Appendix H.

No significant differences exist among grade levels on measures of study skills, study habits, and study attitudes. However, since the number of subjects who were underclassmen was so small, it may be that only the most highly motivated and academically adept underclassmen decided to participate in this study.

ANOVA's were also computed to determine if significant differences existed among grade levels on the overall measure of perceived qualification to teach study skills. These results are presented in Table 28. The results of the ANOVA were non-significant. Thus, perception of qualification to teach study skills is not significantly different between grade levels.

An ANOVA was computed to see whether any significant differences existed between grade levels on

Table 28

Analysis of Variance
of SSQUAL and Grade Level

Source	df	SS	MS	F
Between groups	2	22.6525	11.3262	1.1815
Within groups	29	277.9964	9.5861	
Total	31	300.6488		

Note. $p = .32$

an overall measure of perceived importance of study skills. The results of this analysis are reported in Table 29. The results of this analysis were significant at the .05 level. A post-hoc analysis indicated that the significant difference existed between the junior and senior grade levels . Perhaps the fact that some of the seniors had student taught, or were preparing to, contributed to their perception

of study skills as being more important. Perhaps the underclassmen (freshmen and sophomores) perceive study skills to be as important as seniors do because only the most academically motivated took part in the study and these subjects felt study skills were very important. The fact that the underclassmen finished high school more recently may also have contributed to their perception of the importance of study skills.

Table 29

Analysis of Variance
of SSIMPT and Grade Level

Source	df	SS	MS	F
Between groups	2	68.4507	34.2254	3.5656*
Within groups	29	278.3612	9.5987	
Total	31	346.8119		

Note. * $p < .05$

Subjects were asked to report whether they had taken any classes in which instruction on study skills was included in the course's objectives. These results are presented in table 30. Inspection of the table reveals that subjects were divided approximately evenly on this question.

Table 30

Subjects' Enrollment Status in a Course Which Included Study Skills Instruction

Status	Number	Percent
Had taken study skills class	28	47.20
Had not taken study skills class	25	52.80
Total	53	100.00

Note. N = 53

To determine if any significant differences existed between these groups, t-tests were computed on selected variables. A t-test was computed to determine if any significant difference existed on subjects' perceived importance of study skills. The results were non-significant. A t-test was also computed on perceived qualification to teach study skills. The results were non-significant. Results of a t-test computed on the item on the Study Attitudes Survey which asked subjects if they would be qualified to teach study skills upon graduation (SSQ1) were also non-significant. The results of these t-tests are presented in Appendix I. It appears that whether subjects took a class which had study skills instruction included as class objectives had little effect on perceived importance of study skills and perceived qualification to teach study skills.

T-tests were also computed on selected variables using subjects with different occupational goals (plan to teach, do not plan to teach). Since the group numbers were unequal, the group of subjects who planned to teach was weighted by a factor of .2928. This procedure resulted in equal groups of 12 each.

T-tests were computed to determine if any significant differences existed between subjects with different occupational goals. The results of a *t*-test done on the variable SSQUAL, which assessed the subjects' perception of qualification to teach study skills was non-significant. Results of a *t*-test done on the variable assessing perception of importance of study skills (SSIMPT) were non-significant. Results of the *t*-tests done on the Survey of Study Habits and Attitudes scores Study Attitudes and Study Orientation were also non-significant. Results of these *t*-tests are presented in Appendix J.

These results suggest that no significant differences exist between subjects with differing occupational goals on measures of perceived importance of study skills, perceived qualification to teach study skills and Study Attitudes and Study Orientation.

Multiple regression analyses were computed to determine how much effect selected variables would have on the variance in a dependent variable. A stepwise procedure (with each independent variable being entered in each step of the analysis) was utilized in computing the regression.

Results of the first multiple regression analysis are presented in Table 31. The dependent variable was perceived qualification to teach study skills (SSQUAL). Scores from the Survey of Study Habits and Attitudes (Study Habits, Study Attitudes, and Study Orientation), enrollment in Vocational Agriculture, occupational goals, and perceived importance of study skills (SSIMPT) were entered as independent variables. The data indicate that the combination of variables reported in the table did not explain a significant proportion of the variability of perceived qualification to teach study skills. The combination of variables explained 15.5 % of the variance. This low amount of explanation of variance leads to the conclusion that other factors have a greater effect on the variance in perceived qualification to teach study skills (SSQUAL). Perhaps a measure of academic aptitude in high school and college (e.g., grade point average) would provide more explanation.

Table 31

Regression of Perceived Qualification to Teach Study Skills

Independent variables	R^2	R^2 Change	F[a]
Study Orientation	.020	0	1.027
Study Attitudes	.049	.029	1.278
Study Habits	.051	.002	0.869
SSIMPT	.092	.041	1.220
Occupational goals	.116	.024	1.230
VAENROLL	.155	.039	1.401

Note. [a]F-values non-significant

N = 53

Results of the second regression analysis are presented in Table 32. The dependent variable was perceived importance of study skills (SSIMP). Scores from the Survey of Study Habits and Attitudes (Study

Habits, Study Attitudes, and Study Orientation), perceived qualification to teach study skills (SSQUAL), Age, grade level, and occupational goals were independent variables that were entered into the equation.

The results indicate that a small amount of variance in perceived importance of study skills was explained by the variables. The combination of variables explained 13.5 % of the variance in perceived importance of study skills (SSIMPT). These results also lead to the conclusion that other factors are responsible for the majority of the variance in perceived importance of study skills. Perhaps a measure of academic aptitude (e.g., grade point average), or measures of personality would help to explain more of the variance.

Table 32

Regression of Perceived Importance of Study Skills

Independent variables	R^2	R^2 Change	F[a]
Occupational Goals[b]	.000	.000	0.000
Study Attitudes	.013	.013	0.364
Study Habits	.016	.003	0.321
Study Orientation	.016	0	0.259
SSQUAL	.054	.038	0.194
Age	.090	.036	0.535
Grade level	.135	.045	1.007

Note. [a]F-values non-significant. [b]Regression value and F-value exponential

N = 53

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter is a summary of the study. Included are a summary of the study, methodology, findings, conclusions, recommendations, and recommendations for further research.

Summary of the Study

The major purpose of this study was to assess undergraduate Agricultural Education majors' perceptions of the importance of study skills in teaching study skills in secondary Vocational Agriculture and perceptions of their qualification to teach study skills.

Research Questions

Four research questions were identified to guide the development and evaluation of this study:

1. Are demographic characteristics of undergraduate students in Agricultural Education related to study habits and attitudes, perceived importance of study skills instruction, and perceived qualification to teach study skills?

2. Do undergraduate students in Agricultural Education feel study skills instruction is important in teaching secondary Vocational Agriculture students?

3. Do undergraduate students in Agricultural Education feel qualified to teach study skills in Vocational Agriculture?

4. How do the study habits and study attitudes of undergraduate students in Agricultural Education affect their perceptions of the importance of study skills and their perceived qualification to teach study skills?

Methodology

After the research questions for this study were developed, the population was defined. It was decided to use undergraduate students in Agricultural Education

at Kansas State University as subjects. This decision was made due to the similarity of their curriculum and the generalizability of the results. Subjects were identified using records from the College of Agriculture and the College of Education at Kansas State University.

A survey instrument (Study Attitudes Survey) was developed to gather data (Appendix E). These data included demographic data and Likert-type items assessing perceived importance of study skills, perceived qualification to teach study skills and instruction in study skills. A standardized instrument (Survey of Study Habits and Attitudes) was also used to gather data on subjects' study habits and study attitudes (Appendix G).

Subjects were asked to attend four meetings which were set up for data collection. Subjects unable to attend any of these meetings were asked to make individual appointments to collect data. A total of 53 surveys were completed. This represented a 72.60 percent response from the population. Data analysis was made utilizing the Kansas State University Computing Center.

Major Findings

The findings of this study are presented in the following divisions:

1. Analysis of Demographic Data;
2. Scores on the Survey of Study Habits and Attitudes (SSHA) and the Study Attitudes Survey (SAS)
3. Demographic data, Survey of Study Habits and Attitudes scores and Study Attitudes Survey items

1. Analysis of demographic data

Size of hometown

Thirty-four percent of the subjects came from a farm or ranch and 38 % came from small towns (population 1,001 - 10,000). Nineteen percent came from very small towns (population less then 1,000) and nine percent came from towns with populations over 10,000.

Socioeconomic status

Ninety-two percent of the subjects fell into Classes III, and IV which are both generally classified as "middle class". Two percent fell into Class V ("lower middle class") and six percent fell into Class II ("upper middle class").

High school enrollment

Eighty-one percent of subjects attended high schools which had less than 500 students. Thirteen percent attended high schools with enrollment from 501 to 700 and six percent attended a high school with over 900 students.

Enrollment in Vocational Agriculture

Seventy-nine percent of the subjects have been enrolled in Vocational Agriculture. Sixty-six percent of the subjects were enrolled in four years of Vocational Agriculture. Thirteen percent have had three years or less of Vocational Agriculture.

Enrollment in Secondary Vocational Agriculture Programs where Subjects were Enrolled

Fifty-two percent of subjects were enrolled in high school Vocational Agriculture programs which had between 26 and 50 students. The remainder came from programs which had over 50 students enrolled. No

subjects reported coming from programs with less than 25 students.

Transfer status of subjects

Sixty-four percent of the subjects had transferred to Kansas State University from another school. Of the subjects who had transferred, two percent had transferred from another four-year college. The remainder transferred from community colleges. Thirty-six percent of the subjects had initially enrolled at Kansas State University.

Occupational goals

Seventy-seven percent of the subjects indicated they planned to teach agriculture at either the secondary or postsecondary level after graduation.

Student teaching

Twenty-one percent of the subjects had completed student teaching at the time the study was conducted.

2. Scores on the Survey of Study Habits and Attitudes (SSHA) and the Study Attitudes Survey (SAS)

Study Attitudes Survey

Subjects were asked to respond to a series of Likert-type items which assessed their perceived

importance of study skills, perceived qualification to teach study skills, and instruction in study skills. The results of each item are presented as follows.

Items Assessing Importance of Study Skills

SSIMP1: Subjects generally agreed that they would like to take a course in study skills in college.

SSIMP2: Subjects agreed that study skills instruction should be included in college courses.

SSIMP3: Subjects strongly agreed that study skills instruction should be included in high school courses.

SSIMP4: Subjects agreed that study skills are important for student success in high school.

SSIMP5: Subjects generally agreed that teaching study skills is an important part of instruction in high school Vocational Agriculture.

Items Assessing Qualification to Teach Study Skills

SSQ1: Subjects tended to agree that they would be qualified to teach study skills in high school Vocational Agriculture upon graduation from Kansas State University.

SSQ2: Subjects disagreed that the Agricultural

Education curriculum at Kansas State University prepares graduates to teach study skills in high school Vocational Agriculture.

SSQ3: Subjects agreed that they would include study skills instruction in the high school Vocational Agriculture classes that they taught.

SSQ4: Subjects agreed that they use good study habits as a student at Kansas State University.

SSQ5: Students agreed that they used good study skills as a student at Kansas State University.

Items Assessing Instruction in Study Skills

SSINS1: Subjects tended not to receive study skills instruction in high school.

SSINS2: Subjects tended not to receive instruction on study habits in high school.

SSINS3: Subjects tended not to use materials which explain about study skills and habits in college.

SSINS4: Subjects tended not to recieve instruction on study habits in college classes.

SSINS5: Subjects tended not to receive instruction on study skills in college classes.

Scores on the Survey of Study Habits and Attitudes were consistent with other studies.

The research hypotheses were tested using several statistical techniques. The first hypothesis tested was as follows:

> Perceived importance of study skills instruction will be related to: Delay Avoidance, Work Methods Teacher Approval, Educational Acceptance, Study Habits, Study Attitudes, Study Orientation, (scores on the Survey of Study Habits and Attitudes) and instruction in study skills.

Pearson correlation coefficients were computed to determine if any significant relationships existed among these variables. The results indicated that:

- subjects' desire to take a course in college that teaches about study skills (SSIMP1) was not related to Delay Avoidance, Work Methods, Teacher Approval, Educational Acceptance, Study Habits, Study Attitudes, and Study Orientation.
- subjects desire to take a course in college that

teaches about study skills (SSIMP1) was negatively related to instruction in high school on study skills and study habits.

- that study skills instruction should be included in college classes (SSIMP2) was positively related to Delay Avoidance, Educational Acceptance, Study Attitudes and Study Orientation.
- that study skills instruction should be included in college classes (SSIMP2) was not related to any items assessing instruction in study skills and study habits.
- that study skills instruction should be included in high school classes (SSIMP3) was not related to any scores on the Survey of Study Habits and Attitudes, or to any items assessing instruction in study skills and study habits.
- that study skills are important for student success in high school (SSIMP4) was not related to any scores on the Survey of Study Habits and Attitudes, or any items assessing instruction in study skills and study habits.
- that study skills are important for student success in high school (SSIMP4) was negatively

related to subjects' use of materials explaining about study skills and study habits in college and strongly related to study skills instruction in college classes.

- that teaching study skills is an important part of instruction in secondary Vocational Agriculture (SSIMP5) was not related to any scores on the Survey of Study Habits and Attitudes, and was positively related to study skills instruction in college classes.

The second hypothesis tested was as follows:

Perceived qualification to teach study skills will be related to Delay Avoidance, Work Methods, Teacher Approval, Educational Acceptance, Study Habits, Study Attitudes, Study Orientation, (scores on the Survey of Study Habits and Attitudes) and instruction in study skills.

Pearson correlation coefficients were computed to determine if any significant relationships existed among these variables. The results show that:

- whether subjects would be qualified to teach study skills upon graduation from Kansas State

University (SSQ1) was not related to any scores from the Survey of Study Habits and Attitudes, or to instruction in study skills.

- whether subjects would include study skills instruction in classes that they taught (SSQ3) was related to Work Methods; no other items assessing perceived qualification to teach study skills was related to any score from the Survey of Study Habits and Attitudes.
- that the Agricultural Education curriculum prepared graduates to teach study skills in high school (SSQ2) was positively related to whether subjects used materials explaining about study skills and habits, instruction in study habits in college classes, and instruction in study skills in college classes.
- whether subjects would include study skills instruction in high school classes that they taught (SSQ2) was related to instruction on study skills and study habits in college classes.
- that subjects used good study skills as a student at Kansas State University (SSQ4) was related to instruction on study skills in

college classes.

- that subjects used good study habits as a student in college (SSQ5) was related to instruction on study habits in college classes.

The third hypothesis tested was as follows:

Instruction in study skills will be related to perceived importance of study skills instruction in secondary Vocational Agriculture classes.

Pearson correlation coefficients were computed to determine if any significant relationship existed among these variables. Results of the correlations showed that:

- instruction on study skills in high school (SSINS1) was negatively related to subjects' desire to take a course on study skills in college.
- instruction on study habits in high school (SSINS2) was negatively related to subjects' desire to take a course on study skills in college.
- Subjects' use of materials which explained about study skills and study habits in college

(SSINS3) was negatively related to an item asking if study skills were important for student success in high school.

- instruction on study skills in college classes (SSINS4) was positively related to items asking (1) if study skills were important for student success in high school,(SSIMP4) and (2) if study skills instruction was an important part of teaching secondary Vocational Agriculture (SSIMP5).

3. Demographic data, Survey of Study Habits and Attitudes scores and Study Attitudes Survey items

The fourth hypothesis tested was as follows:

Perceived importance of study skills will be related to demographic characteristics of undergraduates in Agricultural Education.

Pearson correlation coefficients were computed to determine if any significant relationships existed between these variables. The results indicate that:

- age was positively related to an item assessing subjects' desire to take a course on study

skills in college (SSIMP1).

- the number of students enrolled in subject's high schools (HSNUMBER) was negatively related to items assessing whether study skills instruction should be included in high school classes (SSIMP3) and the importance of study skills to student success in high school (SSIMP4).

The fifth hypothesis tested was as follows:

Perceived qualification to teach study skills will be related to demographic characteristics of undergraduates in Agricultural Education.

Pearson correlation coefficients were computed to determine if any significant relationships existed among these variables. The results show that:

- age was positively related to an item asking subjects if the used good study habits as a student at Kansas State University (SSQ5).
- grade level was negatively related to items asking subjects (1) if the Agricultural Education curriculum at Kansas State University prepared them to teach study skills in secondary

Vocational Agriculture (SSQ2) and (2) if they would include study skills instruction in the classes they taught (SSQ3).

The sixth hypothesis tested was as follows:

Instruction in study skills will be related to demographic characteristics of undergraduates in Agricultural Education.

Pearson correlation coefficients were computed to determine if any significant relationships existed among these variables. The results indicate that:

- age was positively related to (1) subjects' use of materials which explained about study skills and habits (SSINS3); and (2) instruction on study skills in college (SSINS4).
- grade level was negatively related to (1) instruction in study skills in high school (SSINS1); (2) instruction on study habits in high school (SSINS2); (3) instruction on study habits in college (SSQ5).
- years of enrollment in Vocational Agriculture (VAYRS) was negatively related to instruction on study skills in college.

- the number of students enrolled in Vocational Agriculture (VAENROLL) was positively related to all items assessing instruction in study skills, both at the high school and college level.

The seventh hypothesis tested was as follows:

Scores on the Survey of Study Habits and Attitudes will be related to demographic characteristics of undergraduates in Agricultural Education.

Pearson correlation coefficients were computed to determine if any significant relationship existed among any variables. The results indicate that:

- no significant relationships exist between any of the variables.

The eighth hypothesis tested was as follows:

Significant differences will be found between grade levels on mean scores of Delay Avoidance, Work Methods, Teacher Approval, Educational Acceptance, Study Habits, Study Attitudes, and Study Orientation (scores from the Survey of Study Habits and Attitudes), perceived

qualification to teach study skills, and perceived importance of study skills.

One-way analyses of variance were computed on each set of variables to determine if any significant differences between grade levels did, in fact, exist. The results show that:

- no significant differences between grade levels were found on scores from the Survey of Study Habits and Attitudes.
- no significant differences between grade levels were found on the measure of perceived qualification to teach study skills.
- a significant difference was found between the junior and senior grade levels on perceived importance of study skills.

The ninth hypothesis tested was as follows:

Significant differences will be found between occupational groups (desire to teach, not to teach) on perceived importance of study skills and perceived qualification to teach study skills.

T-tests for independent samples were computed to determine if any significant differences existed

between these groups. The results of the analyses indicate that:

- no significant differences were found on perceived importance of study skills.
- no significant differences were found on perceived qualification to teach study skills.

The tenth hypothesis tested was as follows:

Significant differences will be found between subjects who have taken a class in study skills and those who have not taken such a class on perceived importance of study skills and perceived qualification to teach study skills.

T-tests for independent samples were computed to determine if any significant differences existed between these two groups. The results show that:

- no significant differences between the groups were found on perceived importance of study skills.
- no significant differences were found between the groups on perceived qualification to teach study skills.

Two stepwise regression analyses were computed. The first regression was done to find out how much of the variance in perceived importance of study skills could be predicted by the independent variables. Results of the regression indicate that:

- the combination of the variables Study Orientation, Study Attitudes, Study Habits, SSIMPT, occupational goals, and enrollment in Vocational Agriculture explains 15.5 percent of the variance in perceived qualification to teach study skills.
- the combination of the variables occupational goals, Study Attitudes, Study Habits, Study Habits, Study Orientation, SSQUAL, Age, and Grade level explains 13.5 percent of the variance in perceived importance of study skills.

Conclusions

From the analysis and interpretations of the data outlined in this study, the following conclusions were made relative to the research questions of the study:

1. As undergraduates in Agricultural Education grow older, they recognize more fully the value of study skills instruction in college. Undergraduates from larger high schools tend not to perceive study skills instruction in high school as that important. Undergraduates from larger high schools also tend not to recognize study skills as very important for success in high school. These perceptions may be influenced by the perceptions of less individual attention in larger high schools and of less academic rigor in classes.

As students become older, they are more likely to feel that they use good study habits in college. This may reflect a higher level of maturity. Students in lower grade levels (freshman and sophomores) are more inclined to feel that the Agricultural Education curriculum prepares them to teach study skills and they will include study skills instruction in secondary classes when they teach.

2. Undergraduates in Agricultural Education feel study skills are important in high school Vocational Agriculture. However, the perception of the importance of study skills in college does not seem to be related to the perceived importance of study skills in high school and secondary Vocational Agriculture.

3. Undergraduates in Agricultural Education feel they are qualified to teach study skills upon graduation from Kansas State University. The use of materials explaining about study skills and habits in college is strongly related to the perception of qualification to teach study skills.

4. Instruction on study skills in college classes appear to have the most effect on perceived importance of study skills. Instruction on study skills and study habits in high school was negatively related to the perceived importance of study skills.

The extent to which a student avoids delay and distraction (Delay Avoidance); agrees with the expressed goals of education (Educational Acceptance); their opinions and beliefs regarding academics and teachers (Study Attitudes); and overall Study Orientation are all related to perceived importance of study skill instruction in college. Thus, subjects' desire to avoid delay and distraction and their agreement with educational goals contribute to how they see the importance of study skills in college.

How effectively the student organizes materials (Work Methods) was related to whether the subject would

include study skills instruction in the classes they taught.

Agreement with the expressed goals of education (Educational Acceptance), opinions and beliefs regarding academics and teachers (Study Attitudes) and overall Study Orientation were negatively related to subjects' use of materials which explained about study skills and study habits in college.

Recommendations

Based on the findings of this study, the following recommendations are made:

1. Based on the finding of strong positive relationships between perceived importance of study skills for student success in high school and of teaching study skills in Vocational Agriculture and study skills instruction in college, it is recommended that instructional units on study skills be included in (1) the Agricultural Education Colloqium class; and (2) the professional education semester. These instructional units should include instruction on: time management and scheduling of study time, text study, exam preparation, memory improvement and notetaking skills. Undergraduates in the professional education

semester should be encouraged to construct lesson plans and instructional units on teaching about study skills and study habits to secondary Vocational Agriculture students. Undergraduates in the professional education semester should also be encouraged to include instruction about study skills and study habits while student teaching.

2. Based on the finding of a significant difference in perceived importance of study skills between the junior and senior grade level, it is recommended that transfer students be required to take a course explaining about study skills and study habits in their first semester at the transfer institution. An instructional unit on study skills in the Agricultural Education Colloquim class would fulfill this requirement for transfer students.

3. Based on the finding of positive relationships between perceived qualification to teach study skills and instruction on study skills and study habits in college, it is recommended that all undergraduate Agricultural Education majors be required to take a course on teaching study skills and study habits and/or a course explaining about study skills and study

habits. Such a course should include the construction of lesson plans and instructional units covering such topics as: reading skills, time management, notetaking, exam preparation, memory improvement and text study.

4. Based on the findings that Educational Acceptance, Study Attitudes, and Study Orientation are all related to perceived importance of study skill instruction in college, it is recommended that the expressed goals of education be presented to students in the Principles and Philosophies of Vocational Education course. Students should be encouraged to discuss the importance of study skills and good study habits among peers in such a class.

Recommendations for Further Research

Based on the research conducted in this study, the following recommendations for further research are noted:

1. Since instruction on study skills and habits is related to perceived importance of study skills and perceived qualification to teach study skills, pretest-posttest research should be conducted utilizing instruments measuring study skills and attitudes with

students enrolled in courses which give instruction on study skills and study habits.

2. Research following graduates into their own classrooms to determine whether they actually included study skills instruction would be beneficial to finding out whether teachers actually teach about study skills and study habits upon graduation from college.

3. Research involving current Vocational Agriculture teachers should be conducted to find out (1) what their attitudes are about study skills instruction; and (2) if they are teaching students about study skills and study habits in Vocational Agriculture.

4. Research involving current Vocational Agriculture teachers should be conducted to find out if they feel qualified to teach about study skills and study habits in Vocational Agriculture.

5. Research should be conducted in secondary classes which include instruction on study skills and study habits to determine its effect on secondary school students' attitudes and acheivement.

6. Research on developing effective instructional units on fostering study skills and study habits for

Agricultural Education students in college and students enrolled in Vocational Agriculture should be conducted.

7. Research evaluating the effectiveness of instructional units on study skills and study habits for Agricultural Education students and students enrolled in Vocational Agriculture should be undertaken.

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APPENDICES

APPENDIX A

COVER LETTER TO SUBJECTS

KANSAS STATE UNIVERSITY

Department of Adult and Occupational Education
College of Education
Bluemont Hall 363
Manhattan, Kansas 66506
913-532-5535

January 24, 1986

Dear Agricultural Education Major,

We would like to ask for your voluntary participation in a research study which will be conducted in February. This study will assess students' perceptions of and attitudes toward study skills; and how well students are prepared to teach study skills in the classroom.

The results will be used to determine if more instruction on teaching and utilizing study skills is necessary in the Agricultural Education curriculum.

Your participation will take approximately one hour. You will be asked to complete two surveys. Of course, you will remain anonymous, and the results will be confidential.

We are encouraging all Agricultural Education undergraduates to take part in this activity. If you wish to participate, please sign the enclosed consent form, check the date you will be able to attend, and return the form as soon as possible to:

Lance Lewis
Adult and Occupational Education
Bluemont 363
Kansas State University
Manhattan, Kansas 66506

Any questions that you might have can be directed to Lance at 532-5904, or in Bluemont 342.

Please return the enclosed form by January 31.

Thank you for your help.

Sincerely,

Richard F. Welton
Professor,
Agricultural Education

Lance B. Lewis
Graduate Teaching Asst.

encl.

APPENDIX B

INFORMED CONSENT FOR PARTICIPATION

KSU
KANSAS STATE UNIVERSITY

Office of Graduate Studies

College of Education
Bluemont Hall
Manhattan, Kansas 66506
913-532-5595

February 19, 1986

Dr. Richard F. Welton
Adult and Occupational Education
Bluemont Hall 363
UNIVERSITY

Dear Dr. Welton:

I have reviewed the information provided regarding the protection of the rights of human subjects in research proposed by Lance B. Lewis. Based on the assurances provided, the research appears either to meet the conditions required by federal or Kansas State University policy or to be exempt from review. I must remind you, the actual protection of the rights of human subjects in research is the responsibility of the investigators and my review does not mitigate this responsibility in any degree. Kansas State University policy requires the informed consent of subjects even for federally exempt research.

Best wishes for the successful completion of this research project.

Sincerely,

Michael C. Holen
Professor and Associate
Dean

MCH:lab

cc: Lance Lewis

** Return this page **

VOLUNTARY PARTICIPATION CONSENT FORM

I agree to partipate in this study, and recognize that my participation is voluntary. I understand that I may withdraw from this activity at any time, and that my identity and any results will remain confidential.

Signature: _____ Date: _____

Participation Attendance Form

All sessions will be held in Bluemont 343. Please show up ten minutes early for instructions. The session will last approximately one hour and will begin promptly at 7:00 p.m.

Thank you for your help.

I will be able to attend on:

_____ Monday, February 17th, at 7:00 p.m.

_____ Wednesday, February 19th, at 7:00 p.m.

_____ I will not be able to attend at these times. The best time for me would be: (please list a time and date)

Time: _____

Date: _____

** Return this page **

VOLUNTARY PARTICIPATION CONSENT FORM

I agree to partipate in this study, and recognize that my participation is voluntary. I understand that I may withdraw from this activity at any time, and that my identity and any results will remain confidential.

Signature: _____ Date: _____

Participation Attendance Form

All sessions will be held in Bluemont 343. Please show up ten minutes early for instructions. The session will last approximately 45 minutes and will begin promptly at 7:00 p.m.

Thank you for your help.

I will be able to attend on:

_____ Wednesday, March 5, at 7:00 p.m.

_____ Thursday, March 6, at 7:00 p.m.

_____ I will not be able to attend at these times. The best time for me would be: (please list a time and date)

Time: _____

Date: _____

APPENDIX C

FOLLOW-UP LETTER I

KSU
KANSAS STATE UNIVERSITY

Department of Adult and Occupational Education
College of Education
Bluemont Hall 363
Manhattan, Kansas 66506
913-532-5535

February 6, 1986

Dear:

I would like to ask you for your voluntary participation in a research study which will be during February. The purpose of the study will be to find out how you feel about study skills and how well students are prepared to teach study skills in the classroom.

Your participation would take approximately one hour. You will be asked to complete two surveys. Of course, you will remain anonymous, and any results will remain confidential.

I encourage you to take part in this activity. If you wish to help, please sign the enclosed form, check the date you would be able to attend, and return the form as soon as possible to:

Lance Lewis
Adult and Occupational Education
Bluemont 363
Kansas State University
Manhattan, Kansas 66506

You may also bring the form to Leah in Bluemont 363.

Thank you for your help and interest in agricultural education.

Sincerely,

Richard F. Welton, Ph.D
Professor
Agricultural Education

RFW:mn

Enclosure

APPENDIX D

FOLLOW-UP LETTER II

KANSAS STATE UNIVERSITY

Department of Adult and Occupational Education
College of Education
Bluemont Hall 363
Manhattan, Kansas 66506
913-532-5535

February 20, 1986

Dear :

Recently I invited you to participate in a research study involving Agricultural Education students at Kansas State. If you have not yet attended one of the sessions to gather data, I urge you to attend a meeting on either March 5 or 6 at 7:00 p.m. in Bluemont Hall. This will be your last opportunity to take part in the study.

Please read the enclosed form and return it to me as soon as possible, either by mail or drop it by my office. Thank you for your help in improving Agricultural Education at Kansas State University.

Sincerely yours,

Richard F. Welton
Professor
Agricultural Education

RFW:amg
enclosure

APPENDIX E

STUDY ATTITUDES SURVEY

STUDY ATTITUDES SURVEY

** DO NOT PUT YOUR NAME ON THIS SURVEY **

To complete this survey, it is important for you to know how study skills and habits can be defined.

Study skills can be defined as academic skills (including time management, reading skills, notetaking, text study, exam preparation, and memory improvement) which contribute to success in coursework. Study habits can be defined as repetitive behaviors which incorporate the use of study skills.

This survey is intended to determine your opinions about study skills. Your contributions are important, so please be as complete and honest as possible.

Section I

Directions: Please answer each question to the best of your knowledge.

1. Size of hometown that you come from: (check one)

Farm/Ranch	_____
0 - 100	_____
101 - 500	_____
501 - 1,000	_____
1,001 - 10,000	_____
10,001 - 50,000	_____
50,000 +	_____

2. What is the occupation of your male parent (this includes father, step-father, or guardian)?

_____

What is the occupation of your female parent (this includes mother step-mother, or guardian)?

_____

How many years of education did each of your parents complete?
(circle the most appropriate number)

Male parent?

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 BS MS PhD MD

Female parent?

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 BS MS PhD MD

3. Number of students at the high school you attended:_____

4. Were you enrolled in high school vocational agriculture?

Yes _____ No _____

Number of years enrolled? _____

5. What was the approximate number of students enrolled in the total vocational agriculture program the last year or semester you were enrolled.

_____ (number)

Section II

1. Did you: (check one)

Begin as a freshman at KSU? _____

Transfer from another school? _____

Community/Junior College _____
Four year college/university _____

2. What is your current classification at KSU? (circle one)

Freshman Sophomore Junior Senior Other

3. Gender: Male ____ Female ____

4. Age _____

5. Occupational goals

____ At the present time, I intend to teach vocational agriculture at the high school or post-secondary level.

____ At the present time, I do not intend to teach vocational agriculture at the high school or post-secondary level.

6. Have you already completed your student teaching?

Yes _____ No _____

Section III

Directions: Please respond to the following statements by circling the number which you feel best expresses your opinion.

Example:	I enjoyed high school.	1 Strongly Disagree	2	3	(4)	5 Strongly Agree

1.	I would like to take a course in college that teaches study skills.	1 Strongly Disagree	2	3	4	5 Strongly Agree
2.	Study skills instruction should be included in college courses.	1 Strongly Disagree	2	3	4	5 Strongly Agree
3.	Study skills instruction should be included in high school courses.	1 Strongly Disagree	2	3	4	5 Strongly Agree
4.	Study skills are important for student success in high school.	1 Strongly Disagree	2	3	4	5 Strongly Agree
5.	Teaching study skills is an important part of instruction in high school vocational agriculture.	1 Strongly Disagree	2	3	4	5 Strongly Agree
6.	I will be qualified to teach study skills in high school vocational agriculture upon graduation from KSU.	1 Strongly Disagree	2	3	4	5 Strongly Agree

7.	The Agricultural Education curriculum at Kansas State prepares graduates to teach study skills in high school vocational agriculture.	1 Strongly Disagree	2	3	4	5 Strongly Agree
8.	As a high school vocational agriculture teacher, I would include study skills instruction in the classes that I teach.	1 Strongly Disagree	2	3	4	5 Strongly Agree
9.	I use good study habits as a student at KSU.	1 Strongly Disagree	2	3	4	5 Strongly Agree
10.	I use good study skills as a student as KSU.	1 Strongly Disagree	2	3	4	5 Strongly Agree

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11. Have you taken any classes in which the development of study skills was part of the class's objectives?

Yes _____ No _____

Directions: Please respond to the following statements by circling the number you think best expresses your opinion. NOTE THAT THE DESCRIPTORS UNDER THE NUMBERS HAVE BEEN CHANGED FROM STRONGLY DISAGREE AND STRONGLY AGREE TO RARELY AND ALMOST ALWAYS .

Example:	I study during the day.	1 Rarely	(2)	3	4	5 Almost Always

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12.	Teachers explained about study skills in high school.	1 Rarely	2	3	4	5 Almost Always

13.	Teachers explained about study habits in high school.	1 Rarely	2	3	4	5 Almost Always
14.	I use materials which explain about study skills and habits in college.	1 Rarely	2	3	4	5 Almost Always
15.	Teachers explain about study habits in college classes.	1 Rarely	2	3	4	5 Almost Always
16.	Teachers explain about study skills in college classes.	1 Rarely	2	3	4	5 Almost Always

THIS IS THE END OF THE SURVEY. THANK YOU FOR YOUR COOPERATION.

APPENDIX F

SURVEY REVIEW COMMITTEE

The following individuals assisted in reviewing and refining items on the Study Attitudes Survey:

Miss Sue Gibbs
Doctoral Student
Economic Education

Dr. Richard F. Welton
Professor
Agricultural Education

Dr. John Parmley
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Agricultural Education

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Assistant Professor
Agricultural Education

APPENDIX G

SURVEY OF STUDY HABITS AND ATTITUDES

SURVEY OF STUDY HABITS AND ATTITUDES

Authors: W. F. Brown and W. H. Holtzman

Publisher: The Psychological Corporation
(Harcourt Brace Jovanovich)
7500 Old Oak Boulevard
Cleveland, Ohio 44130

Copyright: 1953-1967

Forms: H Grades 7-12
C College freshman

Validity: (GPA = criterion)

Correlation of subscales with GPA*

Range of Correlation: .25 - .45
Mean: .36

* 1,772 cases

Reliability: Test-retest

4 weeks and 14 weeks

Range: .83 - .94

APPENDIX H

ANALYSES OF VARIANCE ON GRADE LEVEL AND SELECTED VARIABLES

Table H-1

Analysis of Variance on
Delay Avoidance and Grade Level

Source	df	SS	MS	F
Between groups	2	66.1818	33.0909	.3497
Within groups	29	2744.1993	94.6276	
Total	31	2810.3811		

Note. $p = .70$

Table H-2

Analysis of Variance
on Work Methods and Grade Level

Source	df	SS	MS	F
Between groups	2	125.9711	62.9856	.8711
Within groups	29	2096.9644	72.3091	
Total	31	2222.9355		

Note. $p = .42$

Table H-3

Analysis of Variance
on Study Habits and Grade Level

Source	df	SS	MS	F
Between groups	2	30.2873	15.1436	.0565
Within groups	29	7776.4912	268.1549	
Total	31	7806.7785		

Note. $p = .94$

Table H-4

Analysis of Variance
Educational Acceptance and Grade Level

Source	df	SS	MS	F
Between groups	2	61.1162	30.5581	.4963
Within groups	29	1785.4085	61.5658	
Total	31	1846.5246		

Note. $p = .61$

Table H-5

Analysis of Variance
on Teacher Acceptance and Grade Level

Source	df	SS	MS	F
Between groups	2	52.1957	26.0978	.3654
Within groups	29	2071.1866	71.4202	
Total	31	2123.3823		

Note. $p = .69$

Table H-6

Analysis of Variance
on Study Attitudes and Grade Level

Source	df	SS	MS	F
Between groups	2	216.5088	108.2544	.4884
Within groups	29	6427.2594	221.6296	
Total	31	6643.7682		

Note. $p = .61$

Table H-7

Analysis of Variance
on Study Orientation and Grade Level

Source	df	MS	SS	F
Between groups	2	212.2790	106.1395	.1280
Within groups	29	24042.2418	829.0428	
Total	31	24254.5209		

Note. $p = .88$

APPENDIX I

t-tests FOR INDEPENDENT SAMPLES COMPARING SELECTED VARIABLES FOR STUDY SKILLS CLASS PARTICIPANTS AND NON-PARTICIPANTS

Table I-1

t - test for Independent Samples Comparing SSIMPT Scores for Study Skills Class Participants and Non-participants

Group	SS Class	No SS Class
Number per group	28	25
Mean score	18.96	18.64
Standard Deviation	3.38	2.81
t-value	0.38	

Note. $p > .05$ (df = 51)

Table I-2

t - test for Independent Samples Comparing SSQual Scores for Study Skills Class Participants and Non-participants

Group	SS Class	No SS Class
Number per group	28	25
Mean score	17.50	16.68
Standard Deviation	3.14	3.84
t-value	0.84	

Note. $p > .05$ (df = 51)

Table I-3

t - test for Independent Samples Comparing SSQ1 Scores for Study Skills Class Participants and Non-participants

Group	SS Class	No SS Class
Number per group	28	25
Mean score	3.50	3.36
Standard Deviation	.84	1.254
t-value	0.47	

Note. $p > .05$ (df = 51)

APPENDIX J

t-tests FOR INDEPENDENT SAMPLES COMPARING SELECTED VARIABLES FOR SUBJECTS WITH DIFFERENT OCCUPATIONAL GOALS

Table J-1

t - test for Independent Samples Comparing Study Attitudes for Subjects with different Occupational Goals

Group	Teaching	No Teaching
Number per group	12	12
Mean score	52.26	53.70
Standard Deviation	15.10	15.94
t-value	- 0.24	

Note. $p > .05$ (df = 22)

Table J-2

t - test for Independent Samples Comparing Study Orientation for Subjects with different Occupational Goals

Group	Teaching	No Teaching
Number per group	12	12
Mean score	101.24	96.66
Standard Deviation	29.07	26.58
t-value	0.40	

Note. $p > .05$ (df = 22)

Table J-3

t - test for Independent Samples Comparing SSIMPT for Subjects with different Occupational Goals

Group	Teaching	No Teaching
Number per group	12	12
Mean score	18.95	18.33
Standard Deviation	3.16	3.31
t-value	0.47	

Note. $p \geq .05$ (df = 22)

Table J-4

t - test for Independent Samples Comparing SSQUAL for Subjects with different Occupational Goals

Group	Teaching	No Teaching
Number per group	12	12
Mean score	17.56	15.58
Standard Deviation	3.31	4.05
t-value	1.31	

Note. $p \geq .05$ (df = 22)

AN EXAMINATION OF STUDY HABITS AND ATTITUDES OF UNDERGRADUATE AGRICULTURAL EDUCATION MAJORS

by

LANCE B. LEWIS

B.S. Kansas State University, 1984

AN ABSTRACT OF A MASTER'S THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

College of Education

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1986

ABSTRACT

The primary purpose of this study was to assess the study habits and attitudes of undergraduate students in Agricultural Education at Kansas State University. Fifty-three subjects completed two surveys for this study.

A non-standardized instrument, the Study Attitudes Survey was constructed for this study. The Survey of Study Habits and Attitudes, a standardized instrument, was also used in the study. Scores from the Survey of Study Habits and Attitudes and responses from the Study Attitudes Survey were used in selected statistical procedures.

This study was designed to determine subjects' perception of the importance of study skills and perception of qualification to teach study skills. Results from the study showed that subjects did perceive study skills instruction as important in high school and Vocational Agriculture. Subjects also felt qualified to teach study skills, although they did not agree that the Agricultural Education curriculum prepared them to teach such skills. Subjects indicated that they received little instruction on study skills and study habits in either high school or college.

Perceived importance of study skills was strongly related to instruction on study skills in college classes. Measures of perceived qualification to teach study skills

were related to instruction on study skills and study habits in college classes and to perceived importance of study skills in high school and Vocational Agriculture.

No significant differences were found between grade levels on scores of the Survey of Study Habits and Attitudes. No significant differences were found between grade levels on perceived qualification to teach study skills. However, a significant difference was found between juniors and seniors on a overall measure of perceived importance of study skills.

No significant differences were found on selected variables between students who reported taking a class in study skills and those that did not. No significant differences were found on selected variables between subjects with different occupational goals (would like to teach, would not like to teach).